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A Decade of Progress  
in the Preparation of  
Secondary School Teachers



## Chapter I

### *Introduction*

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THE curriculum of the century-old state schools for the education of teachers in the United States has passed through various stages of development. The first normal schools emphasized review courses, educational theory, and training in a practice school. Later, the review courses gave place to advanced professional subject matter courses and cultural background courses. Finally, because of higher standards and lengthened programs, differentiated curricula were developed by adding to and reorganizing the general education and advanced professional subject matter courses.

Today, the three divisions of a teacher preparation program, namely, education, background, and specialization, are commonly recognized, though they frequently are unified by professional objectives and procedures. In a sense, they are not divisions of a curriculum but terms used to designate the elements of a program of professional education. When used to describe a curriculum, they do not commonly include the continuous exchange of ideas among students outside the classroom, the so-called extracurricular activities, or the spirit which pervades the college life. These factors are important parts of a teacher's education. However, in this study the term background or general education refers to various organized courses or electives which all students should undertake for cultural or professional-cultural purposes; the term education refers to courses or electives in theory and practice of teaching; and the term specialization refers to the courses or electives in a special teaching field.

It is believed that these terms describe the major parts of a teachers college curriculum and that the requirements in the three general fields of work which they designate represent to a signifi-

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cant degree the necessary elements of this curriculum. Furthermore, it is believed that a study of changes and trends in these requirements over a ten-year period, when made in the light of recognized principles of curriculum making in teachers colleges, may lead to significant interpretations and generalizations.

The following outline presents the problems, purposes, and scope of the study, and the procedure followed in gathering and interpreting the data.

I. Problems of the study:

- A. What courses in the fields of background, education, and specialization have teachers colleges designated as necessary for the preparation of secondary school teachers?
- B. What are some of the major changes in the curriculum requirements for the preparation of secondary school teachers?
- C. What general trends in teacher preparation may be noted?
- D. What interpretations of changes and trends may be made and what general principles may be derived?

II. Purpose of the study:

- A. To discover significant changes and trends in curriculum requirements and to note their relation to the problems of curriculum making in teachers colleges.

III. Scope of the study:

- A. The study of practices and trends is limited to the period from 1928 to 1938.
- B. The sources of data are limited to state teachers colleges which have four- or five-year curricula for the preparation of secondary school teachers.
- C. The number of colleges studied has been limited to the 55 (See Appendix, p. 169) which supplied adequate data for 1928 and 1938.
- D. The study of fields of specialization has been limited to the fields studied in 1928 and in certain particulars by indefinite statements relative to requirements in 1928 and 1938.

IV. The sources of data and principles have included catalogs, questionnaires, correspondence, and professional publications.

V. The procedure has involved:

- A. Gathering, checking, tabulating, and summarizing data.
- B. The selection of supporting statements and principles.

- C. Providing criteria for judging requirements in the fields of background, education, and specialization.
- D. Comparison of data, noting practices and possible trends.
- E. Interpreting practices and possible trends in relation to the criteria for judging requirements.

In 1928 the author made a study of the curriculum requirements for the preparation of secondary school teachers in teachers colleges and colleges of education in state and private universities. A brief report of this study was published in 1929.<sup>1</sup> Data for this report were collected by means of a questionnaire which sought information relative to (1) course requirements for professional background purposes, (2) course requirements in education, (3) course requirements for specialization in English, Latin, French, mathematics, biology, and social studies, and (4) the semester hour requirements in each of the above fields. The work sheets, tabulations, and catalogs employed in this study were preserved for later use.

A review of these data, together with relatively close contact with the curriculum problems of teachers colleges which prepare secondary school teachers, led to the conclusion that a study in accordance with the above problems and purposes might be of value.

Background, education, and specialization requirements are of three types: prescribed courses, restricted electives, and free electives. Electives are part of the requirements in that students are required to choose work in specified or general fields for a prescribed number of semester hours. In accordance with the above classification, requirements in the background and education fields can be stated accurately. In certain cases in the various fields of specialization, background courses may or may not be included as part of the total specialization requirements. In order to overcome this uncertainty, the background requirements have been transferred to their respective specialization data sheets and duplications noted and cancelled. This procedure provides an accurate

<sup>1</sup> H. A. Sprague, "Curriculum Requirements for the Training of Secondary School Teachers in State Teachers Colleges and Colleges of Education in State and Private Universities," *Eighth Yearbook, American Association of Teachers Colleges*, pp. 92-108, 1929.

record of the course requirements in the various fields of specialization. However, it does not account for inaccuracies which might arise from situations where students were required to *elect* one or more courses for specialization purposes which might or might not duplicate prescribed or elected background courses. For this reason, only required courses in fields of specialization and total requirements for majors in the respective fields are presented in the section which deals with practices and trends in specialization requirements.

It will be recognized that the practices of the 55 colleges which are included in this study are a fundamental part of the study. These practices are discussed in terms of required work, and it is assumed that in most cases decisions relative to curriculum requirements in a teachers college result from the composite of judgments of state and college authorities or at least from college authorities. The dependability of these decisions relative to practices should be increased when they are found to be in accord with practices noted in corresponding studies. In order to further insure the dependability of conclusions relative to practices and trends, the conclusions have been considered and drawn in relation to criteria of curriculum making which have been derived from the writings of recognized authorities in the field of teacher education. In the majority of cases, the criteria represent the composite of the thinking of experts in the field of teacher education.

## Chapter II

### *Background Requirements for the Preparation of Secondary School Teachers in Teachers Colleges*

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THE state normal school curricula which were limited to two years found it difficult to provide adequate cultural background for their graduates. Since many of these teacher education institutions have organized four-year curricula, they have required a broader general education and their faculties, made up largely of college and university graduates, have found it natural to introduce many of the elements of the liberal arts college program.

The teachers colleges have a diversity of responsibilities because they serve different types of communities or regions. These responsibilities cannot be overlooked. There is, however, a body of information of a general nature which should be studied for cultural background purposes by all prospective secondary school teachers. That such requirements should be made is now justified. Furthermore, there are commonly accepted principles affecting the selection and organization of background or general education materials. The authorities cited in the following section set forth these principles.

#### CRITERIA FOR SELECTING BACKGROUND CONTENT

In 1926 Evenden set up nine principles of curriculum construction in teachers colleges. The third, fourth, and fifth of these principles are quoted because they apply to background requirements:

The third principle of curriculum making is that no teacher can be said to be adequately trained whose preparation is not well grounded in

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practically all of the better known fields of human knowledge—language, literature, social science, natural and physical science, mathematics, music, fine and industrial arts, and health.

The fourth principle of curriculum making is that the courses of study making up each curriculum must be continuous in thought organization and must be inherently sequential. Courses should extend not only forward but laterally to other subjects related in content.

The fifth principle of curriculum making is that relatively little “free election” should be allowed, once the student has selected the type of teaching for which the preparation is to be made.<sup>1</sup>

*The National Survey of the Education of Teachers* discusses practices and trends relative to background requirements in considerable detail. A few general statements and specific recommendations from this survey are quoted below:

General education in the past has assumed knowledge of the social heritage or race experience. In particular, the academic subjects have been conventionally identified as the essential elements of a general education. . . .

It is maintained, however, that the objectives of education must also consider functionality. The school is an agency created to teach growing children to do well the things they need to do. This implies as a primary responsibility, analysis of present-day living and as a secondary responsibility, utilizing of the race experience as “service” materials.<sup>2</sup>

In the same survey, Earle U. Rugg made the following recommendations with respect to general teacher education:

A considerable portion, at least one-fourth of the total pattern, should consist of general non-specialized courses in the fields of experience.

General education should be based on the social and individual needs of students. On one or both counts it would appear, particularly until secondary education is modified to meet more satisfactorily the needs for a general education, that the fields below should be represented:

- a. Health and science.
- b. Civic-social responsibilities and adjustments.
- c. Recreatory and appreciation activities.
- d. Home and family relations.
- e. Philosophy and values.

<sup>1</sup> E. S. Evenden, “Criteria for the Construction of Teachers College Curricula,” *Teachers College Record*, 27:889, June, 1926..

<sup>2</sup> Earle U. Rugg, W. E. Peik, and others, *The National Survey of the Education of Teachers*, Vol. III, pp. 105-106, 1935.

Each field should provide for sufficient time and continuity to insure adequate grasp of survey courses in the field.

Synthesis and articulation are to be sought; hence orientation courses must make use of objective studies which reveal what are the more important problems to be solved in contemporary modes of living, and at the same time utilize any related materials from the systemized subjects as secondary courses of service value.

An alternate plan would be: Specific orientation—survey courses in such fields as physical and mental hygiene, home and family relationships, consumer economics, government, human behavior, speech, comparative literature, and the nature of world and man.<sup>3</sup>

In the same reference Rugg says of elective work,

A small portion, probably not to exceed one-fifth or one-sixth of a four-year program . . . should be provided for elective work.

All elective work should be based upon the best personnel data to be obtained concerning the interests, abilities, and the aptitudes of the students. (p. 147)

The National Survey reported on the curricula of junior colleges, liberal arts colleges, and universities which were designed to prepare teachers. In this report Peik made the following statements relative to background requirements:

It is recommended that teacher education institutions experiment with the development of orientation courses of not too limited credit requirement to permit scholarly treatment of essential topics in the following or similar fields. Such courses might well occupy most of the junior college years or should be supplied in the areas which the student cannot touch with departmental courses.

- a. Fine arts (appreciation course), music, art, sculpture, architecture.
- b. Biological sciences (animal and plant life, physiology, nature study, heredity and evolution).
- c. Physical sciences (astronomy, geography, chemistry, physics).
- d. Social studies or contemporary civilization (economics, sociology, governments).
- e. World history.
- f. Philosophy, ethics and religion.
- g. Comparative literature—ancient and modern.
- h. Possibly general language and the development of English.<sup>4</sup>

<sup>3</sup> *Ibid.*, p. 150.

<sup>4</sup> *Ibid.*, p. 356.

In the same reference Peik stated, "Content must be selected for relative value to teachers as teachers. Vested departmental interests and traditional practices cannot predominate in the face of the needs of a society which demands much of a teacher." (p. 353)

In 1929 M. E. Haggerty, addressing the American Association of Teachers Colleges on the subject, "Whither the Teachers Colleges in the Academic World?" expressed the following point of view:

The teacher is the representative of modern society in the community in which he lives and works. He is society's agent for transmitting this culture in the form of organized knowledge to children and youth. It is his business to direct and quicken the interests of young people and to make them sensitive to the world of ideas, not the dead forms of knowledge to be found in books but the living world of ideas and action throbbing all about them, growing and changing in a thousand ways and issuing in works of science, history, poetry, pictures, music, and thrilling tales. It is the business of our colleges to equip for this very exacting mission.<sup>5</sup>

Two notable studies on orientation and survey courses have been published during the ten-year period 1928-1938. One, the study by Fills and Swift, presents aims and practices,<sup>6</sup> and the other, by Johnson, discusses aims, content, and procedures.<sup>7</sup>

The first study does not make recommendations but shows that of the 79 colleges reporting, 43 taught orientation courses for the purpose of adjusting students to their college life, 17 for the purpose of adjusting students to the methodology of thinking, and 34 for the purpose of adjusting students to their social-intellectual world.<sup>8</sup> Several colleges reported two or more objectives.

After quoting Lowell, Meiklejohn, and Preserved Smith, who strongly advocated the use of survey courses, Johnson said, "The words of Lowell, of Meiklejohn and of Smith, spoken about a quarter of a century ago, might well today—so modern are they

<sup>5</sup> Eighth Yearbook, American Association of Teachers Colleges, p. 42, 1929.

<sup>6</sup> C. T. Fills and F. H. Swift, *The Construction of Orientation Courses for College Freshmen*, pp. 149-242, 1928.

<sup>7</sup> B. L. Johnson, *What About Survey Courses?* 1938.

<sup>8</sup> Fills and Swift, *op. cit.*, p. 222.

—have come from the lips of a Hutchins, a Hawkes, or a Coffman.”<sup>9</sup>

The materials of instruction are frequently divided into three or four fields, such as natural science, social science, and humanities,<sup>10</sup> or biological sciences, physical sciences, social sciences, and humanities.<sup>11</sup> Johnson estimated a total of 13 colleges<sup>12</sup> which followed a “composite” plan in attempting to bring together related facts and theories from the various fields into one unified body of knowledge.

Hutchins emphasized the value of general education to the cultural life of a college or a university:

We can never get a university without general education. Unless students and professors (and particularly professors) have a common intellectual training, a university must remain a series of disparate schools and departments united by nothing except the fact that they have the same president and board of trustees. Professors cannot talk to one another, not at least about anything important. They cannot hope to understand one another.<sup>13</sup>

Wilkins, also, emphasizes the importance of general and specialized knowledge, as follows:

The modern man needs two types of knowledge. If he is to be a sympathetic, broad-minded, and generally intelligent member of society he should have some measure of significant and ordered knowledge of each of the main fields of human interest.

And if the modern man is to render efficient individual service in the maintenance and development of human society, he must have a large measure of significant and ordered knowledge within some special field. College education should, therefore, be in part general, in part special—in part extensive, in part intensive.<sup>14</sup>

The following paragraph from a study of the arts college by Kelly suggests that electives present a problem to liberal arts colleges as well as professional colleges:

<sup>9</sup> Johnson, *op. cit.*, p. 6.

<sup>10</sup> *Ibid.*, p. 12.

<sup>11</sup> F. W. Reeves, W. E. Peik, and J. D. Russell, *Instructional Problems in the University*, pp. 109–136, 1933.

<sup>12</sup> Johnson, *op. cit.*, p. 12.

<sup>13</sup> R. M. Hutchins, *The Higher Learning in America*, p. 59, 1936.

<sup>14</sup> E. H. Wilkins, *The Changing College*, pp. 15–16, 1937.

For the purposes of general culture, the demand for some method of avoiding the evils of free electives other than by the expedient of group requirements is manifesting itself in many places. There is a feeling that students need a common intellectual world.<sup>15</sup>

In 1935 Gray, Stratemeyer, and Alexander reported in the *Twenty-Third Yearbook of the National Society of College Teachers of Education* on principles of curriculum construction for the education of teachers. The third principle presented and the discussion which followed reads:

Breadth of general education should be directed toward sound scholarship and a cultural background in the major areas of human experience.

An adequate program of general education acquaints students with the various institutions and forces that affect modern life and with contributions which the major fields of learning have made and are making today in the progress of civilization. We assume, however, that general education does not imply merely the accumulation of a body of facts related to the various fields of study. Of far greater significance is its value in acquainting students with the major persistent problems of civilization and in preparing them to participate intelligently in their solution.

The major problems include (1) The attempt to raise the standard of living. (2) Adjustment to and control of the physical environment. (3) Adjustment to and cooperation with others. (4) Achievement and maintenance of physical and mental health. (5) Creation, interpretation, and appreciation of art and beauty. (6) Development of guiding principles and the search for ultimate values through science, religion, and philosophy. (7) Achievement of economic security. (8) Acquisition and transmission of the social heritage. (9) Improvement of the social order looking toward the fullest measure of life for all.

The study of such problems requires a clear grasp of significant relationships between important areas of human experience, including philosophy, ethics, religion; economic, social and political problems; literature and the fine arts; the vocations; and the nature sciences.<sup>16</sup>

In 1938, after directing the National Survey of the Education of Teachers which called for an extensive study of curriculum

<sup>15</sup> F. J. Kelly, *The American Arts College*, p. 35, 1925.

<sup>16</sup> W. S. Gray, F. B. Stratemeyer, and T. Alexander, "Principles of Curriculum Construction for the Education of Teachers," *Twenty-Third Yearbook of the National Society of College Teachers of Education*, pp. 79-80, 1935.

problems, Evenden again set forth principles of curriculum making for teachers colleges. At this time he presented the following principles, together with discussions of their application to teachers college background requirements:

Every teacher should have a broad cultural background in the principal fields of organized knowledge.

Until the acquisition of a satisfactory foundation of general education can be assumed as a prerequisite to curricula for teachers, institutions preparing teachers will have to provide or supplement such a foundation. Teachers need this broad cultural background both because it is the approved equipment of any well-informed citizen-leader and also because much of the content of such a general education is of direct value to the teacher, either as material to be taught or as supplementary to such material. . . .

This broad cultural background of general education should, among other things, provide prospective teachers with:

- a. A knowledge of the heritage of the past, an appreciation of present conditions and trends, the opportunity to discover and develop individual cultural tastes and interests, and bases for critical analyses in the subjects which are of concern to well-informed and public spirited citizens.
- b. A systematic overview of the society and the social conditions under which children are living and, as far as discernible, of the society in which they will continue to live. This should include especially an understanding of the fundamental differences between urban and rural society.
- c. An understanding of the fundamental principles of the American and other forms of government and a resulting realization of the importance, in a democracy, of having the intelligent interest and the active participation of all citizens in matters of local, state, and national government.
- d. An understanding of the significant contributions made by each vocation to society's welfare and the direct relationship between the correct choice of a vocation and the happiness and efficiency of the individual.
- e. A knowledge of the recreational facilities which are or should be available for persons of different ages and different types of communities and a realization of the relationships existing between recreation and mental and physical health.<sup>17</sup>

<sup>17</sup> E. S. Evenden, "What is the Essential Nature of an Evolving Curriculum of a Teachers College?" *Seventeenth Yearbook, American Association of Teachers Colleges*, p. 8, 1938.

The following general statements on the functions of teacher education have been made by superintendents of schools who select teachers for public school service:

A program of teacher education has six main functions. . . .

The first function of a program of teacher education is to provide a reasonable mastery of the subject matter taught and of subject matters related to it.

The sixth function of teacher preparation is education for life outside the classroom.

A program of total education should lead to constant observation of changing life and its bearing on education.

Change is inevitable, and schools as social agencies must meet the new conditions and needs of society.<sup>18</sup>

In 1938 Peik issued his preliminary report on teacher education to the Educational Policies Commission. Chapter IV of this report is devoted to a discussion of the characteristics of a teacher's general education, in respect to which he stated that it tends to become "traditional," divorced from contemporary life, compartmentalized, unbalanced.<sup>19</sup> Later he made the following comments:

The general education of a teacher should be highly functional. Through extended contacts he must acquire useful insights into practically all of the fields of human experience, including the fine arts, mathematics, human relations, practical arts, vocations, social studies, language and literature. In general, he needs not only to understand how the present has emerged from the past but also to be intelligently informed about the world as it is, socially, economically, physically, culturally, politically.<sup>20</sup>

The general report of the Regents' Inquiry directs attention to the application of the social principle to secondary education:

What these boys and girls now need is a broad general education which will give to all alike at least the same minimum essential tools of intercommunication and thinking, the same minimum up-to-date scientific acquaintance with the world in which we live, both natural and social, an appreciation of the culture and standards of our civilization,

<sup>18</sup> Ninth Yearbook, Department of Superintendence, National Education Association, pp. 267-269, 1931.

<sup>19</sup> W. E. Peik, *Improvement of Teacher Preparation*, p. 33, 1938.

<sup>20</sup> *Ibid.*, p. 37.

the beginnings of the ability to work well with others, a common understanding and belief in the democratic process, and the desire to preserve and defend self-government. In addition to this, boys and girls need as individuals some understanding of their own bodies and minds, and the opportunity under proper guidance and stimulation to develop their individual capacities, interests, and possibilities for growth. The first need is common to all; its fulfillment is essential to society. The second is different with each, but its satisfaction is likewise necessary to the growth and enrichment, not only of the individual but also of society.<sup>21</sup>

A study of state certificate requirements for secondary school teachers shows<sup>22</sup> that while 29 states issue certificates which limit teachers to the subjects named on the certificate, four make exceptions and 14 make no specific requirements in subject fields beyond various amounts of general college education. This implies a high degree of reliance upon a college program of general education. There are ten states—Alabama, Illinois, Kentucky, Mississippi, Missouri, New Jersey, Oklahoma, Utah, Washington, and West Virginia—which specify subject requirements in general cultural education in addition to requirements in fields of specialization. This practice shows that states which certify secondary school teachers are beginning to recognize the importance of professional-cultural background preparation.

The following quotation from Watson, Cottrell, and Lloyd-Jones shows a lack of confidence in college programs of education and emphasizes the importance of seeing life as a whole:

Despite numerous limitations to effective education in the culture and the social institutions and activities of our time, the profession of education has the opportunity to create the principal conditions for a humane and noble life in America. Little hope can be found, however, that such an ideal will be measurably approached in our generation unless members of the profession itself can become more conscious than they are at present of the nature of such conditions, and more adequately prepared, individually and collectively, to fulfill professional responsibilities. The present narrowness of the typical course of preparation, in relation to the basic social and cultural characteristics of American life, can scarcely be questioned. Richer foundations in such preparation

<sup>21</sup> Luther Gulick, *Education for American Life*, p. 12, 1938.

<sup>22</sup> C. E. Jackson, "State Rules and Regulations Governing Certification of High School Teachers," p. 14, 1938.

constitute perhaps the greatest single need in the work of teachers colleges.<sup>23</sup>

These authors cite Meiklejohn's discussion of the important values in general education as presenting a reasonable standard:

In an English speaking democracy, every man and woman among us must know and delight in Shakespeare and the Bible. Every normal person must have some understanding of what Darwin and Galileo were doing. Music, drama, and the other arts must, at their highest levels, be made matters of common delight. All of us must study Plato and Augustine and Marx and Henry Adams and Emily Dickinson. The permanent and recurring problems of a social order must be, for each member of society, objects of vital and lively study. The life of the community must be shot through with the activities of inquiry, of taste, of creation, of interpretation. The sharing of the most significant human experiences must bring us all together into spiritual unity. We must become a genuine fraternity of learning, afraid of nothing, eager to understand everything. . . . Nothing is more clear than that, taken as a whole, the present attempt of our schools and colleges to establish our young people in the ways of sensitiveness and intelligence is a ludicrous failure. Our boys and girls do not thrill with enthusiasm for the intellectual and esthetic and volitional adventure of the race.<sup>24</sup>

Points of view on basic emphases from the National Society for the Study of Education are expressed in the following quotations:

Fundamentally, however, there is a common concern that underlies all efforts to stress general education in the upper secondary and higher levels regardless of the different emphases. It is a concern that grows out of (1) a dissatisfaction with higher education as now organized, (2) a reaction against an overemphasis upon specialization in the colleges, (3) a new body of information regarding the nature of a college and the characteristics of the student body, (4) the current youth problem in society, and (5) a deepened desire to do something that will make education more effective than it has been in the past, largely, perhaps, in the hope that future generations will be able to solve better such social problems as those that baffle present-day society.<sup>25</sup>

Every program of general education designed to date stresses the need

<sup>23</sup> G. Watson, D. P. Cottrell, and E. McD. Lloyd-Jones, *Redirecting Teacher Education*, p. 38, 1938.

<sup>24</sup> Alexander Meiklejohn, *What Does America Mean?* pp. 233-235, 1935.

<sup>25</sup> "General Education in the American College," *Thirty-Eighth Yearbook of the National Society for the Study of Education*, Part II, pp. 6-7, 1939.

for integration. The word has, perhaps, through endless repetition and overuse, lost some of its forcefulness. Nevertheless, the constant emphasis upon it signalized a quest for some sort of unity now lacking in educational matters.<sup>26</sup>

Despite the differences, however, there is a common desire, in the majority of plans, for general education at the upper secondary and college levels, to relate educational experiences more directly to the needs of human beings who are members of contemporary society, to contribute to the growth of individuals so that they will be more effective in meeting their real day-by-day problems—the more social as well as the more personal, the prospective as well as the more immediate—and to develop the desire and capacity for continuous self-education.<sup>27</sup>

Curriculum studies and experimentation in the secondary schools are naturally of interest to teachers colleges which receive students from and prepare teachers for the secondary schools. The Eight Year Experiment of the Progressive Education Association has set up the following objectives:

First, greater mastery of learning is to be achieved through improved techniques of reading and organization of material. Second, more continuity of learning is to be attained through more coherent development of fields of study and the consecutive pursuit of a particular subject through several years. Third, a release of creative energies is to be attempted through experiences in painting, modeling, writing, drama, and music. Fourth, emphasis is to be placed upon a clearer understanding of the problems of our civilization and the development of a sense of social responsibility. Fifth, a revision of curriculum materials and their organization into new correlations and integrations is contemplated.<sup>28</sup>

The quotations given in the preceding pages emphasize the importance of requiring background work in teachers colleges and also point out the nature and scope of such requirements. The statements come from recognized authorities in the field of teacher education, and in the following instances they represent the best composite of thinking of groups of experts:

1. Principles stated by Evenden in 1926.
2. Principles stated by Rugg in 1935.

<sup>26</sup> *Ibid.*, p. 7.

<sup>27</sup> *Ibid.*, p. 9.

<sup>28</sup> J. W. Wrightstone, *Appraisal of Experimental High School Practices*, p. 185, 1936.

3. Principles stated by Peik in 1935.
4. Principles quoted from the Yearbook of the National Society of College Teachers of Education.
5. Principles quoted from the Ninth Yearbook of the Department of Superintendence.
6. Principles quoted from the Report of the Regents' Inquiry.
7. Principles quoted from the National Society for the Study of Education.
8. Principles quoted from the Progressive Education Report.
9. State certificate requirements reported in 1938.

The following criteria have been derived from the authorities cited:

1. Prospective secondary school teachers should have an understanding of the major present-day social, economic, and political problems.
2. Prospective secondary school teachers should have an understanding of science in modern life.
3. Prospective secondary school teachers should have an appreciation of such aesthetic interests and activities as may be found in connection with literature, music, and other arts.
4. Prospective secondary school teachers should have an understanding of physical and mental health activities and materials.
5. Prospective secondary school teachers should have an understanding of the contributions of the various stages of civilization to the better known fields of human knowledge.
6. Election privileges should tend to decrease as the program for the professional education of teachers becomes more clearly defined.
7. Synthesis and articulation of related fields of knowledge are to be sought in general education.

These criteria should have a direct bearing upon the practices and trends as observed in the study of background requirements for the preparation of secondary teachers in teachers colleges and will be used to interpret the data presented. The curriculum requirements which have been made in the various background fields are shown in the following pages.

## BACKGROUND REQUIREMENTS IN ENGLISH

English is offered for admission to college by practically all high school graduates. Furthermore, it is the subject to which they have given the greatest amount of their high school time. After admission to college, English studies have been the most universally adopted cultural background requirements. This practice is supported by the Joint Committee on English and the National Council of Teachers of English which claim that "The relation of language to the expanding life is so close and intimate that to drop the systematic practice of speaking, writing, and reading at any point in the school program would be like ceasing to take exercise or to take food."<sup>29</sup> Jewett emphasizes the professional values of English instruction to all teachers in that they are teachers of composition, literature, and speech.<sup>30</sup> Bobbitt also emphasizes this claim.<sup>31</sup>

The teachers colleges studied favored the continuation of work in the field of English for background purposes. The problem was one of deciding what courses should be required. As shown in Table I, there were 59 different courses required in 1928. Forty-four of this number were required a total of 128 times. In 1938, 41 were required a total of 131 times.

Variety of titles does not indicate an equally wide variety in the content or general purposes of the courses. Obviously English composition which is required in the freshman year is the same as "Freshman Composition," and judging from the catalog descriptions, "Oral English" and "Oral Composition and Speech" have the same purposes and content. In general, the titles seem to show ingenuity of expression by choice and arrangement of words. Jewett maintains that ". . . uniformity in titles is neither possible nor desirable."<sup>32</sup>

In 1928 and 1938 all of the colleges studied made definite re-

<sup>29</sup> J. F. Hoscic and others, *The Reorganization of English in Secondary Schools*, p. 27, 1917.

<sup>30</sup> Ida A. Jewett, *English in State Teachers Colleges*, p. 130, 1927.

<sup>31</sup> Franklin Bobbitt, *How to Make a Curriculum*, p. 244, 1924.

<sup>32</sup> Jewett, *op. cit.*, p. 168.

TABLE I

## Background Courses Required in English, 1928 and 1938

Background Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Rhetoric and Composition.....	9	6	43 $\frac{2}{3}$	35 $\frac{1}{3}$
Advanced Composition.....	9	0	22	0
Advanced Rhetoric.....	1	0	2 $\frac{1}{3}$	0
English Composition.....	25	25	106 $\frac{2}{3}$	106 $\frac{2}{3}$
English Language and Composition....	0	2	0	7
Rhetoric.....	1	2	5 $\frac{1}{3}$	12
Oral and Written Composition.....	1	1	5	6
Speaking and Writing English.....	1	0	2	0
Freshman Composition.....	2	2	10	13
Composition and Literature.....	0	1	0	4
Journalism.....	1	0	1 $\frac{1}{3}$	0
Narration.....	0	1	0	3
Junior College Composition.....	0	1	0	6
Sentence and Paragraph Structure....	1	0	3 $\frac{1}{3}$	0
Creative Writing.....	0	1	0	3
Fundamentals of English.....	0	1	0	10 $\frac{2}{3}$
Foundations of English.....	0	2	0	5 $\frac{5}{6}$
Writing.....	6	2	9	3 $\frac{1}{3}$
English Grammar and Composition....	8	4	32 $\frac{1}{3}$	23
English Grammar.....	1	2	2 $\frac{2}{3}$	5 $\frac{2}{3}$
Language and Grammar.....	1	0	2 $\frac{2}{3}$	0
Constructive English.....	1	1	2	3
Freshman English.....	4	6	24	36 $\frac{1}{6}$
Materials of High School English....	1	0	5	0
English and American Literature....	3	1	17 $\frac{1}{3}$	6
Survey of English Literature.....	2	3	10	18
Survey of American Literature.....	1	0	2	0
Survey of World Literature.....	1	6	2 $\frac{2}{3}$	39 $\frac{1}{2}$
Humanities.....	0	2	0	13 $\frac{1}{2}$
Introduction to Literature and the Arts	0	1	0	6 $\frac{1}{3}$
Introduction to Literature.....	8	9	24 $\frac{1}{3}$	31 $\frac{1}{3}$
Contemporary Literature.....	1	0	2 $\frac{2}{3}$	0
General Literature.....	0	1	0	6
Literary Masterpieces.....	0	1	0	2 $\frac{2}{3}$
Elements of Literature.....	1	0	3 $\frac{2}{3}$	0
Fundamentals of Literature.....	2	1	4	2
Readings in Literature.....	1	1	2	2
Readings in Poetry.....	1	0	1 $\frac{1}{3}$	0
Types of Literature.....	1	3	2 $\frac{2}{3}$	8 $\frac{1}{3}$
Drama.....	0	1	0	3
English Literature.....	4	8	13 $\frac{2}{3}$	34
American Literature.....	2	4	6	10
Victorian Prose and Poetry.....	1	0	6	0
Dramatic Literature.....	1	0	3	0

TABLE I (*Continued*)

Background Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Oral English.....	1	1	3	3
Fundamentals of Speech.....	4	14	10 $\frac{2}{3}$	33 $\frac{1}{3}$
Essentials of Speech.....	0	1	0	3
Public Speaking.....	5	5	15	15 $\frac{2}{3}$
Science of Discourse.....	1	0	2 $\frac{2}{3}$	0
Advanced Expression.....	1	0	2 $\frac{2}{3}$	0
Oral Expression.....	4	1	10	3
Reading and Speech.....	3	0	8	0
Improvement of Speech.....	0	1	0	3
Speech and Drama.....	1	0	2 $\frac{2}{3}$	0
Oral Composition and Speech.....	0	1	0	2
Corrective Speech.....	0	1	0	2
Extemporaneous Speech.....	1	0	1 $\frac{1}{3}$	0
Voice and Diction.....	1	1	1 $\frac{1}{3}$	2
Library Instruction.....	3	3	3 $\frac{1}{3}$	3
Total for courses required.....	128	131	44 $\frac{1}{3}$	532 $\frac{2}{3}$
Electives required.....	17	11	100 $\frac{1}{2}$	68
Total of required courses and electives.....	145	142	541 $\frac{5}{6}$	600 $\frac{2}{3}$

quirements in English for cultural background purposes. The average number of semester hours required per course was 3.4 in 1928 and 4.0 in 1938. These figures show that although the total number of required courses was decreased from 1928 to 1938, the total requirement was increased. This fact seems to indicate a clearer definition of purpose and more agreement on titles. The list of courses on which there was most common agreement is given in Table II.

Each of the eleven courses listed in the table was required five or more times. Four of the eleven were required less than five times in 1928 and two were required less than five times in 1938. The requirement in English composition has remained notably constant. Where composition was combined with rhetoric or grammar there was a reduction in the requirements. "Freshman English," which aims to provide a functional integration of language, grammar, and composition, in a large unit course, has increased. Jewett noted in 1926 what may be observed from the

list in Table II: ". . . The emphasis upon elaborately formal rhetoric has made place for training in actual writing. . . . Functional or applied grammar is increasingly in evidence and as such the work is often a product of the courses in composition."<sup>83</sup>

TABLE II  
Background Courses Required in English Five or More Times,  
1928 and 1938

Course	Times Required	
	1928	1938
Rhetoric and Composition.....	9	6
Advanced Composition.....	9	0
English Composition.....	25	25
English Grammar and Composition.....	8	4
Writing.....	6	2
Freshman English.....	4	6
Survey of World Literature.....	1	6
Introduction to Literature.....	8	9
English Literature.....	4	8
Fundamentals of Speech.....	4	14
Public Speaking.....	5	5
Total.....	83	85

The three courses in literature listed in the table are of the general or survey type and the number of times that they were required has increased from 13 in 1928 to 22 in 1938, or 70 per cent. In this connection it should be noted that the group of courses in Table I beginning with "English and American Literature" and ending with "Types of Literature" may be classified as general and survey courses, and these 15 courses were required 20 times in 1928 and 30 times in 1938, showing a 50 per cent increase.

In speaking of large unit courses and of broadened and well-integrated views of life through literature, Welsh in 1882 expressed this opinion:

Since the desire of unity and the necessity of referring effects to their causes, are the mainsprings of energy, the knowledge that a thing is, that a certain author wrote certain books, that a certain book contained a

<sup>83</sup> *Ibid.*, p. 128.

certain passage, that a certain passage contains a certain opinion,—is far less important than the knowledge how and why it is,—how the author, the book, the opinions are related, as consequent and antecedent, to some dominant idea or moral state; how this idea or state is shaped by natural bent and constraining force; how from this primitive bent or force we may see in advance, and half predict in advance the character of human events and productions; how beneath literary remains we may unearth the beating of living hearts centuries ago, as the lifeless wreck of a shell is a clue to the entire and living existence. The one is a knowledge of objects as isolated; the other of objects as connected. The first gives facts; the second gives power. An individual may possess an ample magazine of the former and still be little better than a barbarian.<sup>34</sup>

Welsh advanced this theory of education in order to explain his practice of teaching large units of integrated material for purposes of general culture. Although this argument for the integration of related materials in education was presented in the nineteenth century, it was followed by a period during which subjects multiplied and subject matter became less unified. Recently, in accordance with expert opinion, colleges have tended to build larger and better integrated units of work.

Welsh presented his theory in support of a course which included literature in its social and historical setting together with a study of the origin and development of language. In 1938 teachers colleges were making various experiments, such as combining literature with the arts, combining the history and development of language with grammar and composition, and in one case integrating world literature with social studies, music, art, science, and education as various related aspects of cultural patterns studied in the survey of civilization.<sup>35</sup> Several colleges have organized departments of humanities and three colleges have required an organized course in humanities for background purposes.

It is apparent that interest is developing in a study of the origin and development of the language which teachers use and teach. High schools are asking for teachers of general language courses.

<sup>34</sup> A. H. Welsh, *Development of English Literature and Language*, Prologue, pp. x–xi, 1882.

<sup>35</sup> B. L. Johnson, *What About Survey Courses?* Chap. 27, 1937.

Teachers colleges are offering such courses and also requiring English majors to study one or more languages, and a few colleges are combining their English and language majors under the heading of foreign language and English or language and literature.

In Table I 13 courses are listed in the field of speech. It might be reasonable to agree upon fewer titles because the field should not be difficult to define. In 1928 one college required three courses in the field. Now the same college is requiring one course called "Fundamentals of Speech." This course was required four times in 1928 and 14 times in 1938. Less than half of the 26 colleges which required courses in speech in 1938 used some other title.

The emphasis placed upon speech has increased slightly during the ten-year period. More colleges are requiring it and the prescribed courses are being required a greater number of times and for a greater number of semester hours. However, the average semester-hour requirement in listed courses has decreased from 2.7 to 2.5. This is due to the fact that the increase in total semester hours is not comparable to the increase in times required.

There are some observations which may be made of total semester-hour requirements, average semester-hour requirements, and percentages of increase or decrease in the whole field of English and its major divisions. Table I shows that language, grammar, and composition courses were required 72 times and for  $274\frac{1}{3}$  semester hours in 1928. The corresponding figures for 1938 are 60 and  $283\frac{2}{3}$ . The average number of semester hours required in prescribed courses was increased from 3.8 to 4.7. This increase may be due to the apparent desire to build broader courses, such as freshman English and fundamentals of English, in place of short unit courses, such as English composition, journalism, sentence and paragraph structure, language and grammar, and advanced composition. The increase of 23.7 per cent in the average semester-hour requirement may be contrasted with the increase of 3.4 per cent in the total semester hours required. The latter increase shows only a slight change in the total requirements in the field.

The total requirements in the field of literature present two

points of interest. First, it may be noted that though the increase in the times required was from 31 to 42, the total semester hours required show a comparatively greater increase from  $106\frac{1}{3}$  to 183. From these figures are derived the average semester-hour requirements per course of 3.4 for 1928 and 4.4 for 1938—an increase of 29.4 per cent in length of courses in literature. Here the longer and broader courses are of the orientation and survey types.

Survey courses that aim to cut across departmental boundaries appear to be few in number. Correlations with related courses in other departments may be noted more frequently. In general there are but few survey courses involving English which meet the standards set up by the National Council of Teachers of English. Their reports point out a growing demand for teachers who have experienced broad cultural courses:

The reports suggest that correlation, integration, fusion, and synthesis are lines along which vital curricular experiment is moving; that materials for correlative experiment are abundant; that they can be developed into teachable courses; that such courses possess a high interest to the students involved; that teachers of rich culture and resourcefulness are needed to initiate correlative experiments; but that with careful planning, support from the administration, and sympathetic direction by supervisors, success is possible.<sup>30</sup>

If the reports of the National Council of Teachers of English point out a definite trend, it may be expected that survey courses will be required more frequently in teachers colleges.

The second trend to be noted is the increased emphasis upon the cultural type of content as contrasted with more formal subject matter such as that found in composition, grammar, and speech. The increase in semester hours required in literature amounts to 75.9 per cent as compared with 3.4 per cent in grammar and composition and 10.0 per cent in speech. The marked increase in the case of literature is in keeping with the growing emphasis upon socially valuable content including preparation

<sup>30</sup> *A Correlated Curriculum*, A Report of the Committee on Correlation of the National Council of Teachers of English, pp. 283-284, 1936.

for leisure. A discussion of the social values of literature has been presented by the National Council of Teachers of English:

Literature enriches the prospective teacher's experience. It stimulates intellectual life and plays its part in turning his recreational habits toward profitable and enjoyable reading, toward attending better plays, photoplays, concerts, and lectures, and toward utilizing libraries, museums, and art galleries. English and related social studies foster in him a thoughtful openmindedness and give him practice in helping solve community problems, such as better schools, worthier libraries, cinemas that are more honest, and recreational facilities that are more nearly adequate. They develop both understanding of contemporary problems and a desire to participate in attempting their solution.<sup>37</sup>

The colleges studied look upon composition as of first importance. This is true also of the secondary schools, according to the National Survey of Secondary Education.<sup>38</sup> Forty-nine colleges made requirements in this field in 1928 and 51 in 1938. Literature, which was required by 27 colleges in 1928 and 37 in 1938, is second, and speech is third, being required by 20 and 25 colleges for the corresponding dates. The number of colleges requiring students to elect background courses in English has decreased from 19 in 1928 to 11 in 1938 and the total number of semester hours required has decreased from 100½ to 68. The tendency to decrease the opportunity for free choice of courses in a professional school is in keeping with the recommendations made previously in this chapter by authorities in teacher education.

The percentage of time given to English indicates that it is considered of first importance among background requirements.<sup>39</sup> The National Survey of the Education of Teachers shows that of 31 teachers college catalogs analyzed, 97 per cent required from three to 33 semester hours and a median of 11 semester hours. The survey included all types of four-year curricula.<sup>40</sup> This study

<sup>37</sup> *An Experience Curriculum in English*, A Report of the Curriculum Commission of the National Council of Teachers of English, pp. 312-313, 1935.

<sup>38</sup> Dora V. Smith, "Instruction in English," *National Survey of Secondary Education*, p. xi, 1933.

<sup>39</sup> E. U. Rugg and others, *National Survey of the Education of Teachers*, Vol. III, p. 99, 1935.

<sup>40</sup> *Ibid.*, p. 62.

of 55 teachers colleges shows that one or more courses in English were required by all of the colleges. The total number of semester hours required in prescribed courses was  $441\frac{1}{3}$  in 1928 and  $532\frac{2}{3}$  in 1938. By adding the required electives, the grand totals become  $541\frac{5}{6}$  and  $600\frac{2}{3}$ . The average length of courses required was 3.4 semester hours in 1928 and 4.1 semester hours in 1938. The average number of semester hours required by the 55 colleges in prescribed courses and electives was 9.8 in 1928 and 10.9 in 1938. This is an increase of 11 per cent in one department of the division of general education or cultural background. This increase does not include free elections which students make in the field of English. The semester-hour requirements show a wide range of interest in the subject of English. The range for 1928 was from two to 20 semester hours. The mean was 10.3, the standard deviation 3.5, and the median 10.1. The range for 1938 was from 6 to 18. The mean was 11.2, standard deviation 2.9, and the median 10.9. The means and medians are approximately the same for 1928 and for 1938. The difference in standard deviations corresponds with the difference in range.

#### BACKGROUND REQUIREMENTS IN MATHEMATICS

Mathematics, which is generally recognized as one of the highly developed and scholarly pursuits in the field of human knowledge, is of minor importance in the field of general education on the college level. The *National Survey of the Education of Teachers* shows that 1,000 prospective teachers devoted 2.4 per cent of their college time to mathematics for background purposes. The same students had devoted 16.7 per cent of their time in high school to mathematics.<sup>41</sup> Practically all students who plan to enter college study some form of mathematics in high school, the common offering being algebra and plane geometry. It seems that the teachers colleges, and the liberal arts colleges as well,<sup>42</sup> are satisfied with the accomplishments in high school for background purposes, or they do not believe that the study of mathematics has significant

<sup>41</sup> *Op. cit.*, p. 99.

<sup>42</sup> *Ibid.*, p. 204.

value in general education, or they recognize its importance but do not know what to do about it.

TABLE III

Background Courses Required in Mathematics, 1928 and 1938

<i>Course</i>	<i>Times Required</i>		<i>Semester Hours Required</i>	
	<i>1928</i>	<i>1938</i>	<i>1928</i>	<i>1938</i>
College Algebra.....	3	3	12	7
Trigonometry.....	2	2	5	5
Statistics.....	0	1	0	2
Solid Geometry.....	1	0	2	0
Freshman College Mathematics....	0	1	0	6
Introduction to Mathematics.....	0	3	0	8
Fundamentals of Mathematics.....	1	1	3	2
Arithmetic.....	3	1	9 $\frac{1}{3}$	2
Mathematics in Modern Life.....	0	1	0	2 $\frac{2}{3}$
General Mathematics.....	0	1	0	2
Socialized Mathematics.....	1	1	2 $\frac{2}{3}$	2
Cultural Mathematics.....	0	1	0	2 $\frac{2}{3}$
Functional Mathematics.....	0	1	0	3 $\frac{1}{3}$
	11	17	34	44 $\frac{2}{3}$
Electives required.....	9	5	51	35
Total.....	20	22	85	79 $\frac{2}{3}$

Table III shows that in 1928 six courses were required 11 times for a total of 34 semester hours and that 12 courses were required 17 times for 44 $\frac{2}{3}$  semester hours in 1938. In 1928 college geometry, trigonometry, and solid geometry received major emphasis. Orientation courses, such as freshman college mathematics and introduction to mathematics, were not required and the functional mathematics courses received minor consideration. In 1938 there was approximately a 50 per cent increase in the number of times listed courses were required, and it seems that functional and orientation courses replaced a large portion of the traditional courses and electives. The newer types of courses, such as introduction to mathematics, freshman college mathematics, and general mathematics which tend to integrate and vitalize the traditional material, and mathematics in modern life and functional mathematics which emphasize practical applications, are begin-

ning to find a place in the teachers colleges. The National Council of Teachers of Mathematics defines and recommends functional<sup>43</sup> and orientation<sup>44</sup> courses.

In 1928 David Eugene Smith discussed the importance of mathematics in the development of civilization before the National Council of Mathematics Teachers and offered this statement:

A subject even so essential as this in our world economy today need not be mastered by every citizen, and surely no one would think of making any such assertion. What seems reasonable, however, is this: that every educated man or woman should know what mathematics means, what its greatest uses are, and something of its soul, and should be able to decide whether or not he or she cares to pursue its study beyond the point of acquiring this elementary knowledge. Upon this I believe that all persons of fair education are agreed, and the only question is how this introduction shall be given and how far it shall lead.<sup>45</sup>

At the same conference the question was asked, "Are there not more values just as real as those that come from specific knowledge of isolated facts or some specific skills? Too often it seems to me that such values are denied or overlooked because this application of facts and skills is the more obvious."<sup>46</sup>

In 1936 Rosander wrote as follows in *The Mathematics Teacher*:

The secondary school student demands that we use data which have meaning of first rate importance to the individual, or which are associated with pressing social and economic problems whose importance the student will readily see. Instead of the traditional mathematics on the secondary school level, we propose a type of quantitative thinking and quantitative analysis which will help every young American better to understand those social and economic problems which now face this nation.<sup>47</sup>

<sup>43</sup> H. R. Hamley, *Functional Thinking*, Ninth Yearbook of the National Council of Teachers of Mathematics, pp. 37-38, 1934.

<sup>44</sup> William Betz, "The Reorganization of Secondary Education: A Study of Present Problems and Trends with Special Reference to Mathematics," Eleventh Yearbook of the National Council of Teachers of Mathematics, pp. 69-70, 1936.

<sup>45</sup> "Mathematics in the Training for Citizenship," Third Yearbook of the National Council of Teachers of Mathematics, p. 13, 1928.

<sup>46</sup> *Ibid.*, p. 35.

<sup>47</sup> A. C. Rosander, "Mathematical Analysis in the Social Studies," *The Mathematics Teacher*, 29:280, October, 1936.

In 1938 the report of the National Council of Teachers of Mathematics stated: "It is helpful, if indeed it is not essential, to consider how the subject has assisted in the development of our civilization and the extent to which we now depend upon it."<sup>48</sup>

If courses in introduction to mathematics, mathematical analysis, general mathematics, or functional mathematics can do these things then teachers can use the courses. Such courses as these were offered in 1938.<sup>49</sup>

The following paragraph is quoted from the Illinois State Teachers College catalog:

The first course in college mathematics helps the student to see that the branches of mathematics form one great system. To do this some historical facts are used, the relation of arithmetic to algebra is made clear, the universality of mathematical laws becomes evident and the processes of algebraic manipulation take on significance. This course includes a study of the concept of number, fundamental operations with number, formulas and equations with numerous applications, graphical analysis, series and probability, and some of the elementary concepts of statistics. This course is required of all four-year students.<sup>50</sup>

It may be clear from this catalog statement that college students, regardless of their major field of interest, may profitably study the language and history of mathematics in order to understand its relation to civilization. The course in cultural mathematics offered by the State Teachers College, St. Cloud, Minnesota, further illustrates this practice. Perhaps such courses will point out and define a procedure by which students of general education may gain

<sup>48</sup> *The Place of Mathematics in Secondary Schools*, Joint Report of the Mathematical Association of America and National Council of Mathematics Teachers, p. 25, 1938.

<sup>49</sup> "Introduction to Mathematics," *Catalog*, State Teachers College, DeKalb, Ill., pp. 139-140, 1938.

"Mathematics in Modern Life," *Catalog*, State Teachers College, Moorhead, Minn., p. 43, 1938.

"Cultural Mathematics," *Catalog*, State Teachers College, St. Cloud, Minn., p. 62, 1938.

"General Mathematics," *Catalog*, State Teachers College, Greenville, N. C., p. 109, 1938.

"Functional Mathematics," *Catalog*, State College for Women, Milledgeville, Ga., p. 64, 1938.

Heaton, K. L. and Koopman, G. R., *A College Curricula Based on Functional Needs*, p. 64, 1936.

<sup>50</sup> *Catalog*, Illinois State Teachers College, DeKalb, Ill., p. 140, 1938.

interesting ideas or concepts of the meaning and function of mathematics instead of specialized and technical manipulations and skills.

Another course which has gained a minor place among background subjects is statistics. Such a course should have practical and reading values for the teacher both inside and outside the classroom.

In general it should be noted that the majority of the teachers colleges have not required mathematics for background purposes. When it was required, the chances were about even that the colleges would be just as well satisfied if the students made their own choice or choices of courses. The requirements in 1938 show a definite trend toward integrated and functional mathematics. The traditional courses received less attention. Among the recent requirements for professional background purposes are cultural mathematics, introduction to mathematics, and statistics.

The number of courses required has doubled during the ten-year period and the number of times the various courses were required has increased more than 50 per cent. However, the average semester-hour requirement in prescribed courses has decreased from 3.1 to 2.7. This may be due to the fact that nearly half of the courses required in 1938 were somewhat new and in an experimental stage of development. There were 16 colleges which required courses or electives in mathematics in 1928 and 17 in 1938. The requirements in electives decreased during the period and the decrease in elective and traditional course requirements was taken up almost entirely by requirements in integrated, functional, and orientation courses.

#### BACKGROUND REQUIREMENTS IN FOREIGN LANGUAGES

The place of foreign language in college curricula is comparable to that of mathematics in that the teachers college requirements for background purposes are comparatively few and indefinite. Only one college made a specific course requirement. This course, called "Foundations of Language," has the following objectives:

A survey is made of the background, growth, and structure of the English language from its remote ancestry down through the changes wrought by foreign additions and influence, for the purpose of giving all prospective high school teachers a better command and understanding of English; a scientific comprehension of special speech difficulties; a broadened cultural outlook; a cultural pattern and a large margin of information for professional preparation to teach general language in junior or senior high schools.<sup>51</sup>

The course uses high school preparation in foreign language as a prerequisite and orientates students to further study in the field. Though it serves as a background course in foreign language, it might well be classified as background in English. In general it represents an experiment set up to answer the question of what may reasonably be required of all students on a college level from the foreign language field. This course was required in 1928 and in 1938. Tharp has reported that in 1937 general language was taught in high schools in 23 states. "There are ten or twelve text books in print and others are being written. Over ninety per cent of the teachers concerned with such a course report in favor of it."<sup>52</sup> It would seem that such a course should not replace altogether the traditional courses in foreign languages in the high school curriculum. It should, however, have more elements of interest and value for the average student than the systematic and formal courses in foreign languages.<sup>53</sup> "It should serve as an orientation to further study in the language field."<sup>54</sup>

Available tabulated data show that in 1928, 14 of the 55 teachers colleges required their students to elect one modern language. The average number of semester hours required by the 14 colleges was 9.0. In 1938, seven colleges made the same course requirement and the average number of semester hours was increased slightly to 9.5 per cent. The total number of semester hours required in a modern language was 129 $\frac{1}{6}$  in 1928 and 66 $\frac{1}{3}$  in 1938.

<sup>51</sup> Catalog, State Teachers College, Montclair, N. J., p. 55, 1938.

<sup>52</sup> J. B. Tharp, "General Language," *Secondary Education Bulletin of the Department of Secondary Education of the National Education Association*, Vol. 8, No. 1, p. 6, 1939.

<sup>53</sup> M. A. Pei, "Language at the Crossroads," *French Review*, 9:383, April, 1936.

<sup>54</sup> H. D. Roberts and W. V. Kaufers, "A New Orientation of the Language Arts Curriculum," *California Journal of Secondary Education*, 11: 225-226, April, 1936.

For each period several colleges required a study of modern languages for the Bachelor of Arts degree only.

Some colleges have adopted the practice of requiring students to choose a prescribed number of semester hours in a foreign language or mathematics or English. This practice was represented by four colleges in 1928 and by five in 1938. The average number of semester hours required in the department chosen was 13.3 and 10.9 respectively.

In general, language study was required by 27.3 per cent of the colleges in 1928 and 14.5 per cent in 1938, and while the total number of semester hours required has decreased from 131 $\frac{5}{6}$  to 68 $\frac{1}{3}$ , the average semester-hour requirement per subject taken has remained about the same. Nine of the 14 colleges which required a foreign language in 1928 have discontinued the practice. Two colleges have added the requirement since 1928 and five have continued the practice, making a total of seven in 1938.

The above totals refer only to college requirements. They do not include, here or elsewhere, courses in the field chosen by students on the free elective basis. Rugg's<sup>55</sup> study of the transcripts of 1,000 graduates from 20 teachers colleges includes requirements and free electives. It shows that the average student contact with this field was approximately 5.6 semester hours.

Judging from the literature in the language field, colleges are being called upon to make an adjustment in their foreign language offerings. Orientation and appreciation courses may become more prevalent and the social and cultural values of language study may receive greater attention.

#### BACKGROUND REQUIREMENTS IN SOCIAL STUDIES

Social studies received added attention directly after the World War and during the subsequent period of economic stress. Schools which had been concerned primarily with the social heritage have assumed greater interest in the present and its social, political, and economic realities. They could do this with added courage be-

<sup>55</sup> E. U. Rugg, *The National Survey of the Education of Teachers*, Vol. III, p. 99, 1935.

cause of the support which they had received from theories set forth in modern educational philosophy and psychology.

In the field of social studies the same lack of agreement on course titles as has been observed in connection with English may be noted. Table IV shows 60 different titles. Fewer titles are employed to describe the required courses in the older and well-defined fields such as American and European history. General or orientation courses in history have used thirteen titles, five of which were required in 1928 and 10 in 1938, and general or orientation courses in social science used 11 titles, two of which were required in 1928 and 11 in 1938. In the field of government or political science, 13 titles were required, six in 1928 and 12 in 1938. Economics and sociology have required five and six titles respectively and for approximately the same number of times. The total number of course requirements was 63 in 1928 as compared with 101 in 1938. This increase of 60 per cent was less than the increase in the total number of semester hours required in courses listed, which was 89 per cent.

The principal increases in requirements may be noted in connection with orientation courses in history and social science. The list of courses in Table IV which begins with "Contemporary History" and ends with "Man and His Social World" should be noted. The number of different orientation courses in history and social science required from this list was seven in 1928 and 20 in 1938. This represents an increase of 195.7 per cent. The total number of semester hours required in these courses has increased from  $37\frac{1}{2}$  in 1928 to 161 in 1938, or 331.3 per cent. In the field of social science alone the number of semester hours devoted to orientation or survey courses has increased 529.2 per cent. Among the history and social science courses referred to above a considerable number of recently adopted orientation or survey courses may be noted: survey of civilization, civilization and citizenship, background of modern world, introduction to civilization, development of civilization, foundations of western Europe, survey of social science, contemporary civilization, social problems, survey of social studies, current affairs, introduction to modern problems, orientation in social science, man in his social world. Such courses

TABLE IV

## Background Courses Required in Social Studies, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Development of American Nationality.....	1	1	6	6
United States History.....	0	1	0	9
Expansion of American People.....	1	0	8	0
Economic History of United States.....	1	0	2 $\frac{2}{3}$	0
American History.....	12	9	49	44 $\frac{2}{3}$
Modern European History.....	0	2	0	9 $\frac{1}{3}$
European Background.....	0	1	0	2 $\frac{2}{3}$
European History.....	4	0	23	0
History of Western Europe.....	1	0	6	0
Latin American History.....	0	1	0	2 $\frac{2}{3}$
History of the Americas.....	0	1	0	6
Contemporary History.....	1	0	2	0
History of Civilization and Culture.....	1	6	2	32
Survey of Civilization.....	0	2	0	9
World History.....	2	0	9	0
Civilization and Citizenship.....	0	1	0	8
Modern History.....	1	0	5 $\frac{1}{3}$	0
Background of Modern World.....	0	1	0	7 $\frac{1}{2}$
Introduction to Western Civilization.....	0	1	0	6
European and World History.....	0	1	0	4
Post World War History.....	0	1	0	2 $\frac{2}{3}$
Development of Civilization.....	0	1	0	3
Introduction to Civilization.....	2	2	7	8 $\frac{1}{3}$
Foundations of Western Europe.....	0	1	0	6
History, Restricted Electives.....	0	3	0	20 $\frac{2}{3}$
Social Science.....	1	5	4	23
Survey of Social Science.....	0	2	0	10 $\frac{1}{2}$
Contemporary Civilization.....	0	1	0	6
Survey of Social Studies.....	0	2	0	10 $\frac{2}{3}$
Current Affairs.....	0	1	0	4
Introduction to Modern Problems.....	0	1	0	3
Citizenship and Character.....	2	1	7 $\frac{1}{6}$	2
Orientation in Social Science.....	0	1	0	4
Contemporary Georgia Problems.....	0	1	0	3 $\frac{1}{3}$
Man and His Social World.....	0	1	0	8
Problems, Restricted Electives.....	0	1	0	3 $\frac{1}{3}$
State and Federal Government.....	0	2	0	12
American Government.....	5	5	12 $\frac{2}{3}$	13 $\frac{1}{3}$
Political Relations.....	1	0	1 $\frac{1}{3}$	0
Contemporary Political Problems.....	0	2	0	5 $\frac{1}{3}$
American Government and Politics.....	1	1	2 $\frac{2}{3}$	2 $\frac{2}{3}$
Origin and Development of Political Institutions.....	0	1	0	2 $\frac{2}{3}$
Local and State Government.....	0	1	0	2 $\frac{2}{3}$

TABLE IV (*Continued*)

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Political Science.....	2	3	5 $\frac{2}{3}$	9 $\frac{1}{3}$
American Political Institutions.....	0	1	0	3
Federal, State, and Local Government.....	0	1	0	3
Law and Government.....	1	1	2	2
Practical Law.....	1	1	2	4
Texas and Federal Constitution.....	0	1	0	6
Government, Restricted Electives.....	0	3	0	8 $\frac{2}{3}$
Economics.....	2	2	4 $\frac{2}{3}$	5 $\frac{2}{3}$
Principles of Economics.....	3	8	9	24 $\frac{1}{3}$
Origin and Development of Economic Institutions.....	0	1	0	2 $\frac{2}{3}$
Contemporary Economic Life.....	0	1	0	2
Rural Economics.....	1	0	2	0
Sociology.....	6	5	16 $\frac{2}{3}$	13 $\frac{1}{3}$
Principles of Sociology.....	5	3	15	11
Origin and Development of Social Institutions.....	0	1	0	2 $\frac{2}{3}$
Rural Sociology.....	2	0	4	0
General Sociology.....	1	0	4	0
Social Problems.....	0	1	0	3
Free Electives in Social Studies.....	63	101	216 $\frac{1}{2}$	410
	27	16	211	118 $\frac{1}{3}$
Total.....	90	117	427 $\frac{1}{2}$	528 $\frac{1}{3}$

point out a marked tendency to integrate subject matter from the various subject divisions in social studies. Naturally the units of study were larger in 1938 than in 1928 and required a greater number of semester hours.

Tryon has presented a modern point of view in relation to recent attempts to unify related material in the social studies field:

As long as material from the field of social sciences exists in the schools the quest for the most desirable adjustment between the subjects composing the field will continue. The day of isolation is probably gone in theory, even though it still remains in practice. The future will probably see more and more emphasis on the interrelations of the social sciences. This, of course, does not mean that history, political science, economics, and sociology will necessarily disappear as independent subjects of study in the schools. It simply means that as independent sub-

jects each will be expected to live other than a hermitic life. The services of each to all of the others will be central in organizing them for teaching purposes. The principles of concentration and correlation bid fair to enjoy more and more application in the future, the ideas of fusion and integration being included therein.<sup>56</sup>

Table V, on page 37, shows that with the single exception of sociology, more colleges required courses in each of the divisions of social studies in 1938. In fact, there were marked increases in government, economics, and general problems. It should also be stated that there has been an increase not only in the number of colleges requiring courses but also in the number of different courses required, the total number of semester hours required, and the average number of semester hours required.

One possible reason for the decrease in the requirements in sociology has been stated by Ellwood who pointed out that the schools of higher education tend to treat sociology as a pure science apart from the current problems of civilization:

It may, of course, serve the interests of pure science to divorce the social sciences from all concrete questions of social welfare; but it scarcely serves to train teachers of secondary and elementary schools when it is done. The result is, in the popular mind, at least, that social sciences seem divorced from questions of human interest.<sup>57</sup>

Parents object to the theory of evolution, they also object to sex and family problems being discussed, they confuse sociology with socialism. . . . It is these popular reactions which must in part account for a considerable portion of the teachers . . . seeking refuge in pure science.<sup>58</sup>

The movement away from sociology as a pure science may be noted in the extraordinary increase in courses dealing with social problems. These courses have been substituted for sociology and if classified under sociology would change the decrease in requirements to an increase. The percentage of increases or decreases in the total number of semester hours required in prescribed courses and electives is as follows:

<sup>56</sup> R. M. Tryon, *The Social Sciences as School Subjects*, pp. 527-528, 1935.

<sup>57</sup> C. A. Ellwood, *Social Education in the United States*, p. 258, 1930.

<sup>58</sup> *Ibid.*, p. 259.

	Per Cent
History . . . . .	56.25 increase
Government . . . . .	183.9 increase
Economics . . . . .	121.2 increase
Sociology . . . . .	17.2 decrease
Problems . . . . .	557.0 increase
Required Courses . . .	89.4 increase
Electives . . . . .	43.9 decrease
Total Requirements	23.6 increase

These percentages point out a growing recognition of the social principle in curriculum making, and it is probable that the social value of the courses offered has been enhanced by their frequent organization into large unit or survey courses. Such organizations of subject matter are becoming common and significant, especially in cases where related materials in history, economics, government, and sociology are integrated. In a few instances the study of civilization extends beyond social studies but uses social studies as a core about which are integrated related materials in world literature, art, science, and education.

In general the practices in the social studies field seem to be in accord with the statements relative to the importance of social studies and their integration and application which have been quoted in the introductory discussion of background requirements. A statement from Bagley and Alexander suggests that general courses in social studies of the survey type be offered for non-specializing students:

The question arises as to the desirability of offering in the social studies one or more general courses of this type for students whose chief work is in other fields. It would seem especially desirable to do this, since the work of every teacher has social implications and in the last analysis a social purpose. Schools and colleges are social institutions and everyone concerned with the formulation of educational policies (as all teachers should be, whether as members of faculties or as members of professional organizations) should have a dependable knowledge and appreciation of social problems, their origin, their nature, and the proposals that have been made for their solution.<sup>59</sup>

<sup>59</sup> W. C. Bagley and T. Alexander, *The Teacher of Social Studies*, Report of the Commission on the Social Studies, Part 14, p. 72, 1939.

As Table V shows, there were 27 teachers colleges which required students to elect an average of 7.8 semester hours in 1928 and 16 which required an average of 7.4 semester hours in 1938. The decreases in the number of colleges requiring electives and in the total number of semester hours elected are 40 per cent and 43.9 per cent respectively. While there has been a decrease in electives there has been a marked increase in course requirements. This tendency is in accord with the general principle of allowing but few free electives in professional curricula.

Table V does not show the number of colleges which required listed courses or electives or both. However, tabulated data show that in 1928, 28 colleges specified the courses to be required and 27 required students to elect one or more courses, six required electives in addition to specified courses, and the total number of colleges which required one or more courses in social studies,

TABLE V  
Summary of Background Course Requirements and Electives in  
Social Studies, 1928 and 1938

Course	Colleges Requiring		Times Required		Semester Hours Required		Average Number Semester Hours Required	
	1928	1938	1928	1938	1928	1938	1928	1938
History.....	19	28	27	36	120	187½	4.4	5.2
Government....	10	21	12	24	26½	74²/₃	2.2	3.1
Economics.....	5	13	6	12	15²/₃	34²/₃	2.6	2.9
Sociology.....	13	10	15	12	42²/₃	35½	2.8	2.9
Problems.....	4	16	3	17	11½	77½	3.9	4.6
Electives.....	27	16	27	16	211	118½	7.8	7.4
Total.....			90	117	427½	528½	4.7	4.5

either specified or elected or both, was 47. For 1938 the data read as follows: 42 colleges required specified courses, 18 colleges required students to elect courses, 10 colleges required electives and specified courses, and 49 colleges required either or both. The total and average number of semester hours required and elected by the colleges for 1928 and 1938 are as follows:

In 1928, 28 colleges required  $216\frac{1}{2}$  semester hours in specified courses, average per college 7.7; in 1938, 42 colleges required 410 semester hours in specified courses, average per college 9.8. In 1928, 27 colleges required students to elect 211 semester hours, average per college 7.8; in 1938, 16 colleges required students to elect  $118\frac{1}{3}$ , average per college 7.4. In 1928, the total number of semester hours required was  $427\frac{1}{2}$ ; the average for the 47 colleges was 9.0. In 1938, the total number of semester hours required was  $528\frac{1}{3}$ ; the average for the 49 colleges was 10.9.

The increase in the total number of colleges which required social studies, the relative emphasis which has been placed upon social studies, and the degree to which certain courses are considered necessary for prospective teachers support trends previously described.

The range in semester hours required by different colleges was from two to 20 in 1928, and from four to 18 in 1938. The means and standard deviations of these requirements were 9.47 and 4.00 respectively for 1928 and 11.31 and 4.59 for 1938. The range decreased and the standard deviation from the mean increased slightly. The medians for the two distributions were 9.25 and 10.93 respectively.

#### BACKGROUND REQUIREMENTS IN SCIENCE

It has been pointed out in the general discussion of background requirements that science is one of the organized fields of knowledge which should be recognized by teachers colleges in setting up background requirements for prospective high school teachers. Counts points out that "It has occupied an increasingly important place in high school curricula in recent years."<sup>60</sup> Non-specializing students enter college from high school with an average of about one year of science and the selection is made from various courses in the field.<sup>61</sup>

The teachers colleges which would have their students gain a

<sup>60</sup> G. S. Counts, *The Senior High School Curricula*, pp. 66-67, 1926.

<sup>61</sup> *Ibid.*, p. 67. Also, *The National Survey of the Education of Teachers*, Vol. III, p. 99, 1933.

fairly comprehensive knowledge of the major sciences face the question of whether they should require students to elect in accordance with their particular needs or prescribe certain courses without regard to high school background. Furthermore, if they do prescribe courses, what types of courses should they require?

Since such courses as agriculture, geology and astronomy, astronomy and earth science, botany, introduction to human biology, educational biology, and civic biology were not studied commonly by students in high school, little or no duplication was expected in college. General biology, which was most frequently required in college, might to some extent duplicate high school biology. Survey courses which cut across subject and departmental boundaries and stress major concepts should avoid not only serious duplication but also the necessity of trying to fill in gaps by means of comparatively short and isolated courses.

Survey courses in science seem to be regarded as reasonable college requirements for student groups that have had a varied and indefinite amount of high school science. An example of a broad survey course which attempts to unify subject matter from the fields of physical science, biological science, and the science of human behavior has been organized under the title of "Introduction to Science."<sup>62</sup> Other courses classified as survey courses are general science, introduction to biological science, survey of biological science, survey of physical science, survey of physics and chemistry, physical science in modern life, introduction to earth science and survey of science (Table VI). Such courses were required in two instances in 1928. In 1938 the number of such requirements had increased to 24 and the total number of semester hours required increased from 10 to 124 $\frac{1}{2}$ , or 1148.3 per cent. These courses constituted 10 per cent of the total number of prescribed background courses in science in 1928 and 61.5 per cent in 1938. The average number of semester hours devoted to survey courses was 5.0 in 1928 and 5.2 in 1938.

The courses in agriculture have been dropped from the list of background requirements during the past ten years and the number of majors in this field has decreased from 20 to 16. This may

<sup>62</sup> Catalog, The College of Education, Greeley, Colo., p. 90, 1938.

be due to an oversupply of teachers. Individual courses, such as educational biology, civic biology, general biology, and general chemistry have been dropped or reduced in number. Other courses, such as geology and astronomy, have been combined, as may be noted in four cases in 1938. This practice may be regarded as the intermediate step from the short unit courses toward the general survey courses.

In general it may be noted in Table VI that the number of specified background course requirements has increased from 20

TABLE VI  
Background Courses Required in Science, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Agriculture and Gardening.....	1	0	5	0
Elementary Agriculture and Projects....	1	0	3	0
General Agriculture.....	1	0	2	0
Agriculture and Nature Study.....	1	0	2 $\frac{2}{3}$	0
Geology and Astronomy.....	0	1	0	4
Astronomy and Earth Science.....	0	1	0	2 $\frac{2}{3}$
Physical Science and Astronomy.....	0	1	0	3 $\frac{1}{3}$
Chemistry and Geology.....	0	1	0	3 $\frac{1}{3}$
Botany.....	0	1	0	3
Introduction to Human Biology.....	0	1	0	3 $\frac{1}{3}$
Educational Biology.....	3	2	7 $\frac{1}{3}$	5
Civic Biology.....	2	0	4	0
General Biology.....	8	7	43	36 $\frac{2}{3}$
General Chemistry.....	1	0	4	0
General Science.....	0	1	0	7 $\frac{1}{2}$
Introduction to Biological Science.....	2	3	10	12
Survey of Biological Science.....	0	5	0	30 $\frac{5}{6}$
Introduction to Physical Science.....	0	3	0	11
Survey of Physical Science.....	0	5	0	30 $\frac{5}{6}$
Survey of Physics and Chemistry.....	0	1	0	2 $\frac{2}{3}$
Physical Science of Modern Life.....	0	1	0	2
Introduction to Earth Science.....	0	1	0	3
Introduction to Science.....	0	2	0	17
Survey of Science.....	0	2	0	8
	20	39	81	185 $\frac{5}{6}$
Electives in Science.....	30	29	209 $\frac{1}{6}$	213
Total.....	50	68	290 $\frac{1}{6}$	398 $\frac{5}{6}$

in 1928 to 39 in 1938, or 95 per cent. In the same time, the total number of semester hours required has increased from 81 to 185½, or 128 per cent, and the average number of semester hours required in courses has increased from 4.05 to 4.8, or 19 per cent. Electives in science were required by 30 colleges for a total of 209½ semester hours in 1928 and by 29 colleges for a total of 213 semester hours in 1938. There was a decrease in the number of times science electives were required but an increase in the number of semester hours to be elected. The total semester-hour requirement in listed courses and electives was increased from 290½ to 398½, or 37.4 per cent. The notable change was in the number of courses required.

There were 18 colleges which required 81 semester hours in listed or prescribed courses in 1928. Twenty-four of the 30 colleges which required students to elect courses in science made no other requirements in the field and therefore by adding the 24 to the 18 which required specified courses one has a total of 42 colleges out of the total of 55 which made some type of requirement in science in 1928. In the same way the 24 colleges which required listed courses in science was increased by 25 colleges which required electives only, making a total of 49 colleges which required science in 1938. The average college requirement in science for background purposes was 6.9 semester hours in 1928 and 8.1 semester hours in 1938. The average length of courses in 1928 was 4.0 semester hours; in 1938, 4.3 semester hours.

It appears from the nature of courses required that teachers of science are trying to select, organize, and teach materials and ideas which high school students may be better able to understand and use. Such a response to the social motive in general education is reasonable in institutions which carry a responsibility for social efficiency. This movement does not imply that teachers are following the easier way. In fact, it has taken resourceful and master minds such as Jeans and Hogben to lead the way.<sup>68</sup>

The place of science in modern living has been clearly emphasized by the studies of the Bureau of Educational Research in Science of Teachers College, Columbia University, which is under

<sup>68</sup> L. H. Gulick, *Education for American Life*, p. 29, 1938.

the general direction of S. R. Powers. In speaking of science from the point of view of general education, the following statements have been used to summarize the shortcomings:

1. That science teaching fails to give young people a sufficiently clear understanding of the physiology of their own bodies and the conditions of personal and social health.
2. That science teaching fails to give a coherent picture of the world as revealed by science.
3. That too little is done to bring young people to appreciate the applicability of scientific methods to practical problems of all kinds, including psychological and sociological problems.
4. That there is insufficient reference to the practical aspects of science, both with regard to its place in social history and with regard to the part it is playing in the transformation of the world.
5. That young people are not brought to recognize sufficiently clearly the way in which society is dependent upon natural resources and upon technology.
6. That young people are not brought to recognize the major problems confronting society in which science may help.
7. That too little is done to teach science so as to free young people from traditional feelings of fear and guilt, as well as from the influence of quackery, whether commercial, political, or religious.<sup>64</sup>

#### BACKGROUND REQUIREMENTS IN GEOGRAPHY

Geography is commonly required in the elementary schools. High schools which have planned to use this background of information have noted its relation to courses in the social studies field. This has lead to an articulation of the two fields and further experimentation with the idea of fusion. There are organized courses in geography, such as physiography, principles of geography, and climatology, which in contrast to economic and human geography are distinctly science courses. Therefore it seems that geography which is divided between social studies and science has a somewhat indefinite position in colleges which aim to prepare high school teachers. Comparatively few high schools teach geography and the tendency is to combine geography with social studies and general science.

<sup>64</sup> S. R. Powers, "Improvement of Science Teaching," *Teachers College Record*, 40:275-276, January, 1939.

Table VII shows that, not including the geography taught in required survey courses for background purposes, courses in geography were required 18 times in 1928 and 25 times in 1938, and from a classification of the courses listed it may be estimated that approximately all of the requirements in 1928 were of the nature of science and that two-thirds of the courses required in 1938 were in science. It should be noted, however, that perhaps four courses are of the nature of social studies and that these were not required in 1928 but were required for a total of 13½ semester hours in 1938.

TABLE VII  
Background Courses Required in Geography, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Physiography.....	2	2	9½	4½
Principles of Geography.....	4	5	12½	13
Survey of Physical Geography.....	0	1	0	4
Elements of Geography.....	1	4	2½	10
Geography Fundamentals.....	0	1	0	3½
Climatology.....	1	0	2½	0
Economic Geography.....	0	3	0	8½
Geography for High School Teachers.....	0	1	0	2
Regional Geography.....	0	1	0	2
World Geography.....	0	1	0	2½
Electives in Geography.....	8	19	27½	50
	9	6	29½	19½
Total.....	17	25	56½	69½

There was an increase of approximately 100 per cent in the number of times specific geography courses were required and also in the total number of semester hours required in such courses. The number of electives in the field have decreased from nine to six and from totals of 29½ to 19½ semester hours and the total number of semester hours required in listed and elective courses has increased from 56½ to 69½, or 22.3 per cent. The average number of semester hours devoted to listed courses was 3.4 in

1928 and 2.6 in 1938. The number of colleges requiring geography increased from 14 to 18. This actual increase in emphasis upon geography as a separate subject in addition to its increased emphasis in survey courses is evidence of a growing interest in geographic information. It may also be a carryover from the curricula for elementary school teachers or evidence of a lag in organizing related material into survey or integrated courses.

#### BACKGROUND REQUIREMENTS IN GENERAL PSYCHOLOGY

The title of general psychology is well established for psychology courses which serve professional-cultural background purposes. One other title was used in this field, namely, "Personality Development and Adjustments." The description of this course reads as follows: "This is a study of how personality develops through participation in the social environment and how adjustments are made to that environment. It emphasizes the factors that contribute to a normal, balanced personality, as well as influences that lie back of personality maladjustments."<sup>65</sup> It is possible that this course should be classified under education or educational psychology. However, the description does not make this clear. The course was required in 1938 and presents the modern interest in personality development.

General psychology was required 26 times and for a total of  $68\frac{2}{3}$  semester hours in 1928. In 1938 it was required 27 times for  $78\frac{2}{3}$  semester hours and the course in personality development and adjustment made a total of 28 prescriptions for  $81\frac{1}{3}$  semester hours. The average semester-hour requirement was 2.6 in 1928 and 2.9 in 1938. The range was from 2 to 4.

All of the 55 colleges which did not require general psychology required one or more courses in the field of educational psychology with the exception of one in 1928. About one-third of the colleges required general psychology as a prerequisite to educational psychology. Three colleges required only general psychology in 1928 and two colleges in 1938. These practices are confusing because one might say that applications or uses should be discussed or

<sup>65</sup> Catalog, State Teachers College, De Kalb, Ill., p. 103, 1938.

made when the content is being presented and that facts and principles are but means to an end; others might say that applications or integration with practice should not be left to the student in a professional institution as might be the case where only general psychology is required. Bagley has said that "a true curriculum is more than a mere aggregation of courses, it is an organization dominated by a unitary purpose."<sup>66</sup> If this view is accepted, all teachers, including teachers of general psychology, must teach some phase of educational psychology.

In general it should be noted that requirements in general psychology have increased both as to times required and total semester hours required.

#### BACKGROUND REQUIREMENTS IN HEALTH AND PHYSICAL EDUCATION

A health and physical education program generally serves three purposes: first, to promote physical health and skill through recreation and systematic physical exercises; second, to give health instruction through an "organization of learning experiences directed toward the development of favorable health knowledge, attitudes and practices";<sup>67</sup> third, to provide health services through the department's staff and organization.

Table VIII shows that courses which provide for the first type of emphasis are few in number as compared with those which are directed toward health instruction. However, the total emphasis given to each is practically the same.

Physical training as a course title has disappeared and for the most part has given place to the title of physical education. In many instances physical education has assumed a broad purpose by including physical tests, correction exercises, and recreational activities. The newer types of courses in this field are set off by such titles as organized recreation, activity, and recreational activity. These titles signify a special interest in games and sports,

<sup>66</sup> W. S. Learned and W. C. Bagley, *The Professional Preparation of Teachers for American Public Schools*, p. 183, 1920.

<sup>67</sup> "Definition of Terms in Health Education," *Journal of Health and Physical Education*, 5:16-17, December, 1934.

TABLE VIII

## Background Courses Required in Physical Education, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Organized Recreation.....	0	1	0	2
Activity.....	0	3	0	8
Club Work and Recreation.....	1	0	2	0
Recreational Activity.....	0	1	0	4
Physical Education.....	21	25	103	91
Hygiene.....	4	4	9	10 $\frac{5}{6}$
Hygiene and Sanitation.....	3	3	8	8
School Hygiene.....	0	1	0	2
School and Personal Hygiene.....	1	0	1	0
Physiology.....	3	0	7 $\frac{2}{3}$	0
Health Education.....	6	9	32	31 $\frac{2}{3}$
Personal and Community Hygiene.....	0	1	0	3
Foods and Health.....	1	0	6	0
Physical Welfare.....	1	0	5	0
Physiology and Hygiene.....	0	2	0	4
Hygiene and Health.....	1	0	3	0
Personal Hygiene.....	1	4	4 $\frac{1}{3}$	9 $\frac{2}{3}$
Electives.....	43	54	181	174 $\frac{1}{6}$
	1	2	5 $\frac{1}{3}$	10
Total.....	44	56	186 $\frac{2}{3}$	184 $\frac{1}{6}$

hiking and camping, or preparation for leisure. Selke, in speaking of the importance of such preparation, says,

Undirected leisure is a menace. Physical and recreational activities in college should be so broad, so varied and so wholesome and enriching, that they could be listed with literature, music, fine arts, mechanical arts, drama, and countless other fields of culture among the leisure time activities of education.<sup>68</sup>

Twelve courses are listed which provide for the second type of emphasis, or health education. While there are no markedly significant differences in the requirements for 1928 and 1938, it should be noted that physiology has been dropped and personal hygiene and school hygiene have received greater emphasis, and also that

<sup>68</sup> G. A. Selke, "Health Programs for Teachers Colleges," *Sixteenth Yearbook of the American Association of Teachers Colleges*, p. 9, 1938.

community hygiene is beginning to receive some recognition as a required course in this field.

It is not apparent in course titles, but rather in connection with a new standard of the American Association of Teachers Colleges in health education and health facilities, that health service is receiving considerable attention. A recent survey of 157 teachers colleges and normal schools<sup>69</sup> shows that all of these colleges have made not only a definite provision for health services but also for a health program with health instruction reasonably well articulated with health service. It is evident that the new standard has motivated and upgraded the teaching of health education and the developments in health service. The trend in health service is shown by the fact that 33 out of a total of 153 institutions failed to meet the Association's standard in 1935 and none out of a total of 157 failed to meet the standard in 1938.<sup>70</sup>

The report of the Regents' Inquiry on "The School Health Program" emphasizes strongly that "the program of health instruction should include in its range mental, emotional, and social, as well as physical health."<sup>71</sup> "We know today that the burden laid upon society by mental and emotional maladjustments is equal to that caused by all other defects and disabilities taken together."<sup>72</sup>

#### BACKGROUND REQUIREMENTS IN ART AND MUSIC

It has been noted under background requirements in English that in two courses the arts have been taught in connection with literature. The courses referred to are humanities and introduction to literature and art.

Table IX shows the courses that were required in art and music in 1928 and 1938. Eleven courses are listed in art. Six of these were required 15 times and for a total of  $32\frac{1}{3}$  semester hours in 1928. Six were required 13 times for a total of  $28\frac{1}{2}$  semester

<sup>69</sup> C. W. Hunt, "Secretaries' Report," *Seventeenth Yearbook, American Association of Teachers Colleges*, p. 145, 1938.

<sup>70</sup> *Ibid.*, p. 144.

<sup>71</sup> C. E. A. Winslow, *School Health Program*, p. 5, 1938.

<sup>72</sup> *Ibid.*, p. 3.

hours in 1938. Courses in the appreciation of art received slightly more emphasis in 1928 than in 1938 while courses in music appreciation received greater emphasis in 1938. There were 13 colleges which required one or more specific courses in art for background purposes in 1928 and 12 in 1938. The average number of semester hours required in courses was 2.2 in both years.

There are no especially significant differences between the amount of course requirements in music and those in art. Music was required a fewer number of times in 1938 but for a greater number of total semester hours. The average number of semester hours required was 1.8 in 1928 and 2.2 in 1938. There were 13 colleges which required specified courses in music in 1928 and 12 in 1938. The number of colleges which required both art and music was 13 in 1928 and 11 in 1938. The number of colleges

TABLE IX

## Background Courses Required in Art and Music, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
General Course in Art.....	2	0	6	0
Art Appreciation.....	7	7	11	12
History and Appreciation of Art.....	1	0	2	0
Aesthetics.....	0	1	0	4
Introduction to Art.....	0	1	0	3
Foundation of Art.....	0	1	0	2
Art and Industries.....	0	1	0	2 $\frac{2}{3}$
Application of Art.....	0	2	0	4 $\frac{2}{3}$
Drawing.....	3	0	7 $\frac{1}{3}$	0
Drawing and Applied Art.....	1	0	3	0
Manual Arts.....	1	0	3	0
Total Art.....	15	13	32 $\frac{1}{3}$	28 $\frac{2}{3}$
History and Appreciation of Music.....	1	0	2	0
General Course in Music.....	3	0	9	0
Music Appreciation.....	8	10	12 $\frac{1}{3}$	20 $\frac{2}{3}$
Music Literature.....	1	0	2	0
Music in High School.....	0	1	0	4
Elementary Theory.....	0	1	0	2
Sight Singing.....	1	0	0	0
Total Music.....	14	12	25 $\frac{1}{3}$	26 $\frac{2}{3}$

**Main**

which required listed or elective courses in one or both fields was 18 and 19 in the respective years.

Table X shows the totals for listed or prescribed courses and electives in both fields.

TABLE X

Summary of Background Courses Required in Art and Music,  
1928 and 1938

Courses	Colleges Requiring		Times Required		Semester Hours Required	
	1928	1938	1928	1938	1928	1938
Listed courses.....	14	14	29	25	57 $\frac{2}{3}$	55
Electives required in art.....	3	2	3	2	19 $\frac{1}{6}$	10
Electives required in music.....	0	0	0	0	0	0
Electives required in music or art..	1	3	1	3	2 $\frac{1}{2}$	20
Total			33	30	79 $\frac{1}{3}$	85

In general it may be noted that the number of semester hours required has increased slightly and appreciation courses have received greater emphasis. However, approximately two-thirds of the colleges do not require courses of any kind in music and art. Free electives are commonly available to students and may be applied in this field. Frequently, because of the limited number of free electives, administrators have to choose between provisions for the individual interests or choices of students and the professional interests or needs of all prospective teachers.

## SUMMARY

The data on background requirements for the preparation of high school teachers in 55 teachers colleges reveal practices relative to the following: courses required, times courses were required, number of semester hours required, average semester hours required, number of colleges requiring specified courses and electives, the amount of election, and the amount and percentages of increases or decreases in requirements.

TABLE XI  
Summary of Cultural Requirements in the Preparation of Secondary  
School Teachers in 55 Teachers Colleges, 1928 and 1938

I	Semester Hours Required in Prescribed Courses				Semester Hours Required in Elective Courses				Total Semester Hours Required				Average Semester Hours Required per College				Per Cent Subject Totals Are of Total Sem. Hrs. Required					
	1928	1938	Increase or Decrease over 1928	Number	1928	1938	Increase or Decrease over 1928	Number	1928	1938	Number	1928	1938	Increase or Decrease over 1928	Per Cent	1928	1938	Per Cent	1928	1938		
Field	Number of Semester Hours	1928	1938	Increase or Decrease over 1928	Number	1928	1938	Increase or Decrease over 1928	Number	1928	1938	Number	1928	1938	Increase or Decrease over 1928	Per Cent	1928	1938	Per Cent	1928	1938	
English.....	441 <sup>1</sup> / <sub>6</sub>	532 <sup>2</sup> / <sub>3</sub>	+ 91 <sup>3</sup> / <sub>6</sub>	100 <sup>4</sup> / <sub>3</sub>	68	- 32 <sup>5</sup> / <sub>6</sub>	- 32.3	- 32 <sup>5</sup> / <sub>6</sub>	54 <sup>1</sup> / <sub>6</sub>	600 <sup>2</sup> / <sub>3</sub>	+ 58 <sup>1</sup> / <sub>6</sub>	+ 10.8	10.9	- 10.9	- 10.8	26.4	26	1928	1938	Per Cent	1928	1938
Social Studies.....	210 <sup>1</sup> / <sub>2</sub>	193 <sup>1</sup> / <sub>2</sub>	+ 89.3	211	118 <sup>3</sup> / <sub>6</sub>	- 92 <sup>3</sup> / <sub>6</sub>	- 43.9	427 <sup>1</sup> / <sub>6</sub>	528 <sup>2</sup> / <sub>3</sub>	+ 100 <sup>1</sup> / <sub>6</sub>	+ 23.6	0.0	10.9	20.8	- 22.8	14.1	17.2	1928	1938	Per Cent	1928	1938
Science.....	81	185 <sup>5</sup> / <sub>6</sub>	+ 104 <sup>5</sup> / <sub>6</sub>	159.8	209 <sup>3</sup> / <sub>6</sub>	+ 3%	+ 1.8	290 <sup>1</sup> / <sub>6</sub>	398 <sup>5</sup> / <sub>6</sub>	+ 108 <sup>5</sup> / <sub>6</sub>	+ 37.4	6.9	8.1	- 14.1	- 14.1	- 17.2	1928	1938	Per Cent	1928	1938	
Health and Physical Education.....	181	174 <sup>1</sup> / <sub>6</sub>	- 6 <sup>1</sup> / <sub>6</sub>	3.6	5 <sup>1</sup> / <sub>6</sub>	+ 10	+ 4 <sup>2</sup> / <sub>6</sub>	+ 87.6	186 <sup>1</sup> / <sub>6</sub>	184 <sup>1</sup> / <sub>6</sub>	- 2 <sup>1</sup> / <sub>6</sub>	- .9 <sup>8</sup>	- 4.6	- 4.3	- 9.1	8.0	1928	1938	Per Cent	1928	1938	
Foreign Language.....	2 <sup>2</sup>	2 <sup>2</sup>	- 2 <sup>2</sup>	- 25.0	120 <sup>1</sup> / <sub>6</sub>	66 <sup>1</sup> / <sub>6</sub>	- 62 <sup>5</sup> / <sub>6</sub>	- 48.5	131 <sup>1</sup> / <sub>6</sub>	68 <sup>3</sup> / <sub>6</sub>	- 63 <sup>1</sup> / <sub>6</sub>	- 48.3	8.8	8.5	- 6.4	3.0	1928	1938	Per Cent	1928	1938	
Mathematics.....	34	44 <sup>3</sup> / <sub>6</sub>	+ 10 <sup>3</sup> / <sub>6</sub>	35	35	- 16	- 31.4	85	79 <sup>2</sup> / <sub>3</sub>	- 5 <sup>1</sup> / <sub>6</sub>	- 6.3	5.3	- 4.7	4.1	- 3.4	1928	1938	Per Cent	1928	1938		
General Psychology.....	68 <sup>2</sup>	81 <sup>1</sup> / <sub>6</sub>	+ 12 <sup>1</sup> / <sub>6</sub>	18.2	29 <sup>1</sup> / <sub>6</sub>	- 10	- 34.2	68 <sup>2</sup> / <sub>3</sub>	81 <sup>1</sup> / <sub>6</sub>	+ 12 <sup>1</sup> / <sub>6</sub>	+ 18.2	2.6	2.9	- 3.3	3.5	1928	1938	Per Cent	1928	1938		
Geography.....	21 <sup>2</sup>	27 <sup>1</sup> / <sub>6</sub>	+ 2 <sup>1</sup> / <sub>6</sub>	93.2	19 <sup>1</sup> / <sub>6</sub>	- 9 <sup>1</sup> / <sub>6</sub>	- 47.8	50 <sup>5</sup> / <sub>6</sub>	69 <sup>1</sup> / <sub>6</sub>	+ 12 <sup>1</sup> / <sub>6</sub>	+ 22.3	1.6	2.3	- 2.3	3.0	1928	1938	Per Cent	1928	1938		
Art.....	32 <sup>1</sup> / <sub>6</sub>	28 <sup>1</sup> / <sub>6</sub>	- 4	12.3	19 <sup>1</sup> / <sub>6</sub>	10	- 9 <sup>1</sup> / <sub>6</sub>	51 <sup>1</sup> / <sub>6</sub>	38 <sup>3</sup> / <sub>6</sub>	- 13 <sup>1</sup> / <sub>6</sub>	- 25.5	3.4	2.7	- 2.5	1.7	1928	1938	Per Cent	1928	1938		
Music.....	25 <sup>1</sup> / <sub>6</sub>	26 <sup>2</sup> / <sub>3</sub>	+ 1 <sup>1</sup> / <sub>6</sub>	5.3	2 <sup>1</sup> / <sub>6</sub>	20	+ 17 <sup>1</sup> / <sub>6</sub>	25 <sup>1</sup> / <sub>6</sub>	20 <sup>2</sup> / <sub>3</sub>	+ 1 <sup>1</sup> / <sub>6</sub>	+ 5.3	1.8	2.0	- 1.2	1.2	1928	1938	Per Cent	1928	1938		
Music or Art Restricted Electives (Not Classified).....					155	192 <sup>5</sup> / <sub>6</sub>	+ 37 <sup>5</sup> / <sub>6</sub>	+ 24.4	155	192 <sup>5</sup> / <sub>6</sub>	+ 37 <sup>5</sup> / <sub>6</sub>	+ 24.4	11.1	12.0	- 7.5	8.3	1928	1938	Per Cent	1928	1938	
Free Electives.....		1,110 <sup>1</sup> / <sub>6</sub>	+ 425 <sup>2</sup> / <sub>3</sub>	+ 38.4	94.8 <sup>1</sup> / <sub>6</sub>	78.5 <sup>1</sup> / <sub>6</sub>	- 166 <sup>1</sup> / <sub>6</sub>	- 17.6	2,058 <sup>3</sup> / <sub>6</sub>	2,377 <sup>1</sup> / <sub>6</sub>	+ 250 <sup>1</sup> / <sub>6</sub>	+ 12.6	37.4	- 42.1	- 1.3	100.1	100.3	Per Cent	1928	1938		

Table XI summarizes a part of these data. It presents in column 3 the actual increases or decreases in semester hours required in prescribed courses and the percentage of increase or decrease in these prescriptions; in column 5 similar data are presented relative to electives; and in column 7 data are given with respect to the totals of prescriptions and electives. The supporting data are presented in columns 2, 4, and 6 respectively. In column 8 is shown the average number of semester hours required per college in the various subject fields. These averages were obtained by dividing the subject totals in column 6 by the number of colleges requiring courses in the respective subject fields for 1928 and 1938. The number of colleges which made such requirements may be noted in Table XII.

TABLE XII  
Number of Colleges Requiring Courses in Various Fields

Field	Colleges Requiring	
	1928	1938
English.....	55	55
Social Studies.....	47	49
Science.....	42	49
Health and Physical Education.....	40	55
Foreign Languages.....	15	8
Mathematics.....	16	17
General Psychology.....	26	28
Geography.....	14	18
Art.....	15	14
Music.....	14	13
Art or Music.....	1	3
Restricted Electives (not classified).....	14	16
Free Electives.....	2	2

Since the percentages in column 7 of Table XI may be misleading because some of them are based upon too few cases, the data in column 9 are given and may help to point out the relative importance of requirements in the years 1928 and 1938. However, the percentages do not show the effect of electives upon the subjects in which requirements were made.

Important increases in the total number of semester hours re-

quired (column 6) were in English, social studies, science, geography, general psychology, and the arts (7.1%). The most notable increases were in social studies, science, geography, and general psychology. If literature had been considered separately, it would have ranked with the latter group.

The increases in literature, social studies, and science were largely in orientation and survey courses.

There was a decrease in the number of semester hours assigned to free electives in the background fields, and restricted electives which were much more frequently required than free electives also show a marked decrease. The decrease in the number of semester hours devoted to free and restricted electives was from 948½ to 781½, or 17.6 per cent. The increase in the number of semester hours assigned to prescribed courses was from 1,110½ to 1,535½, or 38.4 per cent. The increase in the total number of semester hours devoted to cultural background work was 12.6 per cent, which means a considerable addition to the total program of studies. The average number of semester hours required in prescribed and elective courses by the 55 colleges was 37.4 in 1928 and 42.1 in 1938. The requirement for 1938 amounts to approximately *one-third of the total four-year curriculum*. This is the minimum requirement in background work. It does not include the background courses which students would take as free curriculum electives. However, the minimum of 42.1 is approximately 33 per cent above the amount suggested by E. U. Rugg in the National Survey.<sup>73</sup>

Such a requirement is comparatively generous for any type of college curriculum designed to prepare secondary school teachers. This fact may be noted by subtracting the average education and student-teaching requirements and the average major and minor requirements from the average total requirement for graduation as in the 57 selected colleges and universities studied by W. E. Peik.<sup>74</sup>

The comparatively high cultural background requirement of the

<sup>73</sup> *National Survey of the Education of Teachers*, Vol. III, p. 150, 1933.

<sup>74</sup> *National Survey of the Education of Teachers*, Vol. III, Appendix C, p. 530, 1935.

55 teachers colleges in 1938 may be accounted for in part by the fact that Rugg's estimate referred to all teachers colleges and all curricula including those for elementary school teachers. Furthermore, it is reasonable to believe that the teachers colleges have increased background requirements in response to the emphasis given to general education by the authorities quoted in the first part of this chapter. There seems to be a feeling today on the part of many that general education should receive even greater emphasis. This was noted in a recent address by Kefauver at Cleveland before the National Associations of Teacher Education sponsored by the American Council on Education. He called attention to the fact that California has proposed a minimum requirement of 60 semester hours in general education for high school teachers.<sup>75</sup> This may be possible in a five-year program.

The percentages in column 9 of Table XI are based upon the total semester hours required in prescribed and elective courses (column 6). It answers such questions as, what percentage of the total requirement in 1928 was devoted to English? The percentages gained indicate the rank order of background subject fields based upon requirements in 1928 and 1938. English, social studies, science, and health and physical education ranked first, second, third, and fourth respectively in 1928 and 1938. Foreign languages ranked fifth in 1928 and tied with geography for seventh place in 1938. Mathematics ranked sixth in 1928 and sixth in 1938. By combining the arts, it will be noted that they commanded 3.8 per cent of the total requirements for 1928 and 1938 or seventh place in 1928 and fifth place in 1938.

The fact that English held first rank in 1938 is due to the increase in requirements in literature. Though social studies and science did not change their rank, marked increases were made in these fields during the ten-year period. There was practically no change in the actual number of semester hours required in health and physical education. Foreign languages and mathematics both lost rank in 1938. It seems that this is due to the fact that they are not considered as functional or social in value as social studies or

<sup>75</sup> G. N. Kefauver, "Needs and Challenges in Teacher Education," *Eighteenth Yearbook, American Association of Teachers Colleges*, 1939.

science. It is not easy to see why general psychology jumped from seventh to fifth place except that it was in competition with two apparently weak contenders, language and mathematics. Furthermore there may be a tendency on the part of some teachers colleges to follow the liberal arts tradition of requiring general psychology. Bagley has stated that "a more general course in 'pure' psychology is of doubtful value as an introduction to professional study."<sup>76</sup>

The variation in total background requirements by the 55 teachers colleges shows a wide range from 12 to 83 semester hours in 1928 and from 13½ to 85 in 1938. For 1928 the arithmetical mean was 37.4, the median was 35.3, and the standard deviation was 14.7. For 1938 the arithmetical mean was 42.1, the median was 41.2, and the standard deviation was 12.6. In 1928, 18 colleges required less than 30 semester hours and eight required more than 55 as compared with five which required less than 30 semester hours and six more than 55 in 1938. With the exception of four extreme cases the range for 1938 would have been from step 25-29.9 to step 60-64.9. In fact, 38 of the 55 cases would have ranged from 30 to 50 in 1938 as compared with 26 having the same range for 1928.

#### CONCLUSIONS

Curriculum changes have been made in the general education or background requirements of 55 state teachers colleges which prepare secondary school teachers. From these changes certain trends may be noted which seem to be in accord with principles of curriculum construction as stated by recognized authorities.

1. The study of prescribed courses for background purposes tends to show that there is a movement away from traditional academic subject matter requirements and toward functional courses related to present-day human experiences. Such changes in practice seem to be in response to the professional needs of prospective teachers.

<sup>76</sup> W. S. Learned and W. C. Bagley, *The Professional Preparation of Teachers for American Public Schools*, p. 393, 1920.

2. Authorities have stated that secondary school teachers should be familiar with present-day social, political, and economic problems. It is evident that marked increases have been made in the amount of emphasis placed upon these phases of modern life.

3. The marked increase in course prescriptions in the field of science indicates that prospective teachers will have a better understanding of the natural and technical forces which influence modern life.

4. There has been a moderate amount of increase in the emphasis placed upon literature. The emphasis placed upon art and music will be disappointing to curriculum experts in the field of teacher education.

5. More teachers colleges are requiring health service and courses in health and physical education. There has been little change in the total semester-hour requirements.

6. There has been a significant decrease in the amount of election granted to students. This signifies a clearer definition of professional values.

7. There has been a marked increase in number of orientation or survey courses. It seems evident that teachers colleges are endeavoring to unify related facts into well-integrated bodies of knowledge.

8. The interest in general education for professional-cultural background purposes has increased. It may not be assumed that this trend will continue unless curricula are lengthened.

## Chapter III

### *Education Requirements for the Preparation of Secondary School Teachers in Teachers Colleges*

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THE last fifty years have brought major changes in the preparation of high school teachers. Before the turn of the century the normal schools were still giving major attention to theory and practice of teaching and the colleges and universities were giving major emphasis to academic subject matter. The growth in high school enrollment was accompanied by two movements. The normal school program moved toward the traditional college ideal of scholarship and the colleges, to a degree, moved toward the traditional normal school practice of emphasizing pedagogy. It was quite natural for the normal schools to take a professional attitude toward the added subject matter and equally natural for the colleges to take a separatist's attitude toward educational theory and practice. The attitude of the colleges and universities toward education forced their education departments to become schools of "pedagogy." It seems that to the degree that the normal schools—frequently transformed into teachers colleges—have retained their professional attitude toward subject matter, they have preserved one of their important professional assets and to the degree that they have segregated their education courses and thereby prevented the functional integration of professional theory with subject matter and student teaching, they have weakened their professional program.

#### CRITERIA FOR SELECTING EDUCATION CONTENT

The institutions which prepare teachers must be professional. To this end they have endeavored to face the question as to what

education courses or activities should be carried on and to what extent. Colleges of various types, state departments of certification, and national and regional associations which accredit teacher education institutions have also endeavored to answer the question. The following authoritative statements throw light upon this question and are quoted in order to point the direction of changes and trends.

This tendency to make definite both the academic and professional preparation required of each and every type of prospective teacher and to organize both the academic and professional prescriptions into a continuous, sequential, and related curriculum to be followed consistently by prospective teachers, is one of the most hopeful and potent recent developments in the whole field of teacher training; for it is only by so doing that teacher training will ever become thorough-going and scholarly and be elevated to a semi-professional level.<sup>1</sup>

An unpublished study by Jackson of the state rules and regulations covering the certification of high school teachers in 1938 presents the following statements and data with respect to professional preparation:

Professional preparation is requisite in all states for all high school certificates. The variation in the number of semester hours is great. Exclusive of student teaching the range is from two to twenty-seven semester hours. Including student teaching and observation, the range is from two to fifty-two.<sup>2</sup>

This study covers the professional requirements for 78 different high school certificates. The mean education requirement for these certificates was 14.4 semester hours when student teaching was not included and 16.9 when student teaching was included. Fifty-nine per cent of the certificates required from 15 to 18 semester hours.

Fifteen states do not limit the professional preparation to particular subjects. Eleven states restrict or specify the areas from which the sub-

<sup>1</sup> Frank P. Bachman, *Training and Certification of High School Teachers*, pp. 34-35, 1930.

<sup>2</sup> Claude E. Jackson, "State Rules and Regulations Covering Certification of High School Teachers," p. 14, 1938.

jects may be selected. Twenty-one prescribe a part of the requirement and permit election for the remainder. The subjects are specified totally or in part as a requirement for the attainment of forty-five certificates. The following table shows the extent to which the designated subjects are required.<sup>3</sup>

Certificate Requirement in Professional Subjects \*  
(Forty-Five of the Seventy-Eight Certificates)

Subject	Certificate Requirement	Requirement Specified in Semester Hours	
		Number	Mean
Educational Psychology.....	42	32	3.
Principles of Teaching.....	17	12	2.7
General Methods.....	17	16	2.7
Materials and Methods in Major.....	13	10	3.4
History of Education.....	12	5	2.4
Secondary Education.....	8	8	2.9
Materials and Methods in Minor.....	7	5	2.8
Philosophy of Education.....	6	1	4.
Educational Measurements.....	5	4	2.3
Principles of Education.....	5	2	2.
Organization and Management.....	4	2	3.
Secondary School Supervision and Administration.....	4	4	3.
Problems in Secondary Education.....	4	2	2.
Psychology of Adolescence.....	3	3	3.3
School and Community Hygiene.....	2	2	2.
Guidance.....	2	1	2.
Aims and Organization.....	2	1	3.
Curriculum Construction.....	2	1	3.
Biology, Anthropology, Sociology.....	1	0	
Psychology of Secondary School Subjects.....	1	1	2.
Primary Education.....	1	1	3.
Health Education.....	1	1	3.

\* Claude E. Jackson, "State Rules and Regulations Covering Certification of High School Teachers," p. 16.

Student teaching is a bona fide requirement in thirty-two states for forty-one certificates. However, three of these states also issue certificates which may be obtained without student teaching, and five states recognize experience in lieu of. Twelve states do not require this type of training or preparation. The following table shows a distribution of the number of semester hours which are required by the forty-one certificates.<sup>4</sup>

<sup>3</sup> *Ibid.*, p. 15.

<sup>4</sup> *Ibid.*, p. 16.

Semester Hours of Student Teaching Requirements of  
Forty-One Certificates\*

<i>Semester Hours</i>	<i>Frequency</i>
(Clock Hours, (20).....	1
(Clock Hours, (36).....	1
2.....	4
2½.....	2
3.....	16
4.....	6
5.....	3
6.....	5
10.....	1
12.....	1
25†.....	1
Mean.....	4.4

\* Claude E. Jackson, "State Rules and Regulations Covering Certification of High School Teachers," p. 17.

† Eventual policy.

Authorities in the field of teacher education frequently recognize that education courses such as those commonly listed do not describe adequately the work of the department of education. A few authorities have recommended definite courses and have stated in detail the essentials of the courses recommended. This was the practice of Bagley in his report on the survey of teachers colleges in Missouri.<sup>5</sup> However, in setting up a general principle of curriculum organization, Bagley stated, "It involves the integration of all the work . . . into one consistent whole." If this were done, he says, "there would be an end of the too well founded criticism that courses in theory have no influence upon practice . . . are not even reflected in the practice courses offered in the same school."<sup>6</sup>

Bagley makes this general comment with regard to specific courses:

The so-called "professional" courses—psychology, history of education, principles of teaching, school management, practice teaching, and the like, should be judged not only by the extent to which they increase specific skill in classroom procedure, but also by their contribution to the broader professional intelligence and insight of the teacher. In con-

<sup>5</sup> W. S. Learned and W. C. Bagley, *The Professional Preparation of Teachers for American Public Schools*, pp. 178 and 228, 1920.

<sup>6</sup> *Ibid.*, pp. 183-184.

nection with the latter aim, the claims of biology, sociology, and economics should be considered as well as those of the professional courses now recognized.<sup>7</sup>

In speaking of the organization of collegiate curricula for the professional preparation of teachers, Bagley stated,

The curricula of collegiate grade that have for their purpose the preparation of teachers should be professionalized throughout in the sense that every course be chosen with specific reference to the contribution that it makes to the teacher's equipment.

The focal characteristic of every such curriculum should be participation in the actual work of teaching; consequently, the training school should be looked upon and administered as the central feature of the organization. . . . Insofar as formulated disciplines exist that clearly promote skill and power in a given position, the principle of free or group election should give place to prescriptive sequences prepared by experienced observers.<sup>8</sup>

The author of the above quotations is a firm believer in limiting professional institutions to purely professional purposes and in so integrating the total professional program that, at least to a degree, all courses would be courses in education. An attempt to apply this theory in the preparation of secondary school teachers is discussed in the proceedings of the Institute for Administration Officers of Higher Institutions.<sup>9</sup>

In the same proceedings G. F. Arps has presented the results of the work of a special committee on required professional courses for the preparation of high school teachers at Ohio State University.

The required professional courses for high school teachers now stands as follows:

Elementary Psychology—5 quarter hours.

Educational Psychology—5 quarter hours.

Introduction to the Study of Education—4 quarter hours.

Theory and Practice of Secondary School Teaching—8 quarter hours.

<sup>7</sup> *Ibid.*, p. 393.

<sup>8</sup> *Ibid.*, p. 392.

<sup>9</sup> H. A. Sprague, "The Program of Teacher Education at New Jersey State Teachers College, Montclair," *The Academic and Professional Preparation of Secondary School Teachers*, pp. 122-136, 1935.

Special Methods Courses in Each Teaching Field with different hours for each.

Supervised Teaching in Secondary Schools—7 quarter hours.

Freshman Orientation— $1\frac{1}{2}$  quarter hours.<sup>10</sup>

In actual operation the new curriculum, on the one hand, overstresses theoretical considerations which do not find their basic roots in the science of life; and, on the other hand, courses dealing with the prenatal and postnatal facts of the human offspring are conspicuously omitted. There are, to be sure, plenty of verbalistic references to child nature, but no attempt is made to bring together systematically the pertinent facts which the scientists have discovered over a period of three-quarters of a century. These facts, concerning the nature of man and his place in nature, lie, so far as the educationalist is concerned, inertly buried in the literature of the scientists.<sup>11</sup>

Evenden, while recognizing that there has been considerable controversy relative to education courses, has stated,

There is little doubt in the minds of most citizens and none in the minds of most teachers that a teacher does need to know something about the place of the school in society, the nature of the children being taught, the difficulties in learning the different subjects, the most effective methods of presenting certain information or developing certain skills, the standards of accomplishments which should be expected, the methods of adjusting school work to individual needs, and similar information which is distinct from the knowledge of the specific subject taught.<sup>12</sup>

Recommendations concerning the amount and distribution of the distinctly professional elements in the education of teachers have been presented by Evenden in brief form under several different headings:

*a.* Professional orientation—the relation of education to society and the possibilities open in educational service.

*b.* Educational “service” courses—the essential concepts and techniques used frequently in other courses and in educational literature.

*c.* An understanding of the child to be taught.

*d.* Knowledge of the essential methods of teaching for the grade or subject to be taught.

<sup>10</sup> *Ibid.*, p. 112.

<sup>11</sup> *Ibid.*, p. 119.

<sup>12</sup> E. S. Evenden, *National Survey of the Education of Teachers*, Vol. VI, pp. 72-73, 1935.

- e. Knowledge of the organization and management of class instruction in various types of schools.
- f. Acquisition of a "safety minimum" of teaching skill through observation, participation, and practice teaching.
- g. A summarized and integrated "working philosophy" of education and an understanding of the individual's relationship to education and society.<sup>13</sup>

In discussing the practice of conducting courses concerned with the study of education, Rugg has taken the following position:

An attempt to set up distinguishing criteria for teacher education would require first of all, that intangible thing called professional spirit. Second, it should demand unity or singleness of purpose. Third, it ought to demand a program of experiences which would equip prospective teachers with knowledge, techniques, appreciations, and ideals of teaching and at the same time produce cultivated and educated teachers. Fourth, it should provide the essential equipment and laboratory facilities by which at least the simpler aspects of practice or application of theory can be carried out under supervision.

In teachers colleges where unity and singleness of purpose make it possible, provision should be made for continuous study of materials representative of needed professional information, skills, techniques, and appreciation.<sup>14</sup>

The *Twenty-Third Yearbook* of the National Society of the College Teachers of Education has presented the following discussion of student teaching and standards:

Directed teaching is a necessary part of the education of a teacher. Studies by Peik and Ligon seem to show that directed teaching is the most important of all the professional courses. Although we have no accurate measures of success in teaching, college marks in directed teaching yield the highest correlation found in studies concerned with prediction.<sup>15</sup>

State departments of education and all organizations responsible for standards of teacher education should make it clear through their regulations that teaching demands special professional preparation.<sup>16</sup>

<sup>13</sup> *Ibid.*, pp. 173-174.

<sup>14</sup> E. U. Rugg, *National Survey of the Education of Teachers*, Vol. III, pp. 94-95, 1935.

<sup>15</sup> *The Education of Teachers*. National Society of College Teachers of Education, p. 132, 1935.

<sup>16</sup> *Ibid.*, p. 219.

The Department of Superintendence has for many years taken an active interest in teacher preparation. In its *Fifteenth Yearbook* it has dealt with the improvement of education and its interpretations for democracy. The following paragraphs express the Department's views:

From the foregoing analysis of the changes in organization, administration and curriculum objectives of the new school, it is apparent that new demands will be, and are being made, upon the teacher who is to fulfill its purposes. A type of instruction in which the center of interest lies in the relationship of child to community, calls for a teacher who is a guide rather than a disciplinarian. Such a person will need to be community minded, to have an increased sensitivity to social and economic changes, and to possess a broad background of familiarity with the social and economic environment gained from wider reading and larger experience of community life.

Obviously, this new teacher cannot be plucked out of thin air. Nor will it be easy for the more conservative, conventional type of present-day teacher to yank himself by his own bootstraps into a position of community leadership or a state of social-mindedness. He must have expert assistance in making these adaptations to the new demands of his profession. The primary responsibility of giving this leadership to the classroom teacher devolves upon teacher-training agencies and upon the administrative officers of public school systems.<sup>17</sup>

With respect to the indoctrination of attitudes, the Department has this to say:

For the teacher-training school, then, there are two basic goals to keep before the student-teacher—two attitudes with which the prospective teacher should be indoctrinated: The first, an attitude of pride in the increased usefulness of his profession, and an eager desire to avail himself of its wider professional opportunities; the second, a fundamental reverence for the high calling of community service through educational leadership.<sup>18</sup>

A special committee of the Department of Secondary School Principals, in a report made in 1934 on the issues of secondary education, presented ten issues, each of which offers a challenge

<sup>17</sup> *The Improvement of Education, Fifteenth Yearbook, Department of Superintendence, National Education Association*, pp. 147-148, 1937.

<sup>18</sup> *Ibid.*, p. 151.

to the classroom teacher. The following statements from the report emphasize the importance of a working knowledge of the aims, organization, and principles of secondary education.

No person should be a teacher, supervisor, or administrator in the secondary field unless he has a clear vision of the place of the secondary school in the whole educational scheme, both above and below.

Each teacher, supervisor, and administrator should have a clear concept of the special functions of secondary education.

No activities should find a place in the secondary school that do not contribute clearly to the realization of the special functions of secondary education.

An adequate guidance program is necessary in the secondary school.

We must get rid of the idea of one school preparing for another and foster the idea of the schools continuously centering attention on the intellectual and emotional needs of the child. This is needed particularly in the high school where emphasis on subject matter fields is prevalent.

Diagnostic tests should be given periodically to determine what children know and what they need to be taught.<sup>19</sup>

The Department of Secondary School Principals followed its report on *Issues* by a report on *Functions* in 1937. Statements which bear upon systematized knowledge and guidance are quoted:

It is to be expected that the methods of systematizing knowledge adopted by secondary schools will in practice be modified by the individual teacher. The school may select the materials of learning to be used, establish general principles of procedure, and define the ends of education, but it must leave in the hands of the teacher the final problem of converting all three into the pupil's educational growth. Hence by training and by native ability, a teacher should be a master at adapting knowledge to learning so skillfully that the proper habits, skills, concepts, and attitudes will emerge from a pupil's school experiences and modify his subsequent behavior.<sup>20</sup>

Every member of the staff, in whatever capacity he functions, should be made to realize his opportunity and challenge in the guidance program. His approach to and contact with the pupil should be flavored with the guidance techniques, that of making the child feel he cares what

<sup>19</sup> *Issues of Secondary Education*, Department of Secondary School Principals, National Education Association, pp. 247-248, 1934.

<sup>20</sup> F. L. Bacon, in *Functions of Secondary Education*, Department of Secondary School Principals, National Education Association, pp. 117-118, 1937.

happens to him and that he will give him all possible help in aiding him to set up and achieve worthy and challenging objectives.<sup>21</sup>

The Educational Policies Commission has stated that "one of the major needs within its purview was the improvement of the preparation of teachers. Accordingly, plans were set in motion to prepare a statement of the problems in this field."<sup>22</sup> Peik, who was commissioned to present these problems, reported as follows:

The prospective teacher must acquire an understanding of the functions and purposes of education in society and of the historical evolution, the prevailing practices and the current policies of the institution in which he is to work.

It is essential that a teacher be thoroughly familiar with childhood and adolescence, with the characteristics of these periods, with the extent and nature of individual differences, and with the nature of the learning process.

An understanding of the principles of statistics and of educational and mental measurements enables the teacher to become a more intelligent consumer, and to a lesser degree, a producer of educational research.

Planning units of instruction, locating references suitable to a given stage of development and further discriminative selection of varying degrees of ability, together with a knowledge of courses of study and their construction, are essential phases of professional orientation.

The organization, administration, and supervision of education is a general element of technical education concerning which each teacher should be well informed.

He also needs accurate information about such phases of his own profession as: salary schedules, economic security, professional ethics, sabbatical leave, professional organization, tenure, health, disability, retirement, and his relation to school board, superintendent, principal, and associates.<sup>23</sup>

Teaching preparation cannot be measured adequately merely by pencil-and-paper tests. Actual teaching performance with a class; the use of English as an instructor; demonstrated ability in planning, using, and evaluating units of instruction; ability to guide cooperative thinking and discussion of controversial points; ability to teach on short notice; ability to carry through a piece of research in the field; and actual use,

<sup>21</sup> C. H. Threlkeld in *Functions of Secondary Education*, p. 214.

<sup>22</sup> *Improvement of Teacher Preparation*, Educational Policies Commission, National Education Association, p. 1, 1938.

<sup>23</sup> *Ibid.*, pp. 53-55.

for example, of a library for adjusting instruction to individual differences—all these are tests of competency to be used along with the customary verbal examinations to estimate the scope and adequacy of general education and of specialization in teaching fields.<sup>24</sup>

The following section of a paragraph from Judd is quoted from a *Report of the Regents' Inquiry* on the preparation of teachers:

The content of professional courses is to some extent agreed upon by experienced instructors in the science of education. There should be a comprehensive study of the learning process and of child development. There should be a study of the characteristics and most urgent problems of the American educational system. There should be some study of the ways in which instructional materials are to be arranged and presented in class exercises. There should be preparation of the prospective teacher in methods of testing pupils and measuring the results of instruction.<sup>25</sup>

It seems that during the past decade educational authorities have increased their attacks upon the disintegrating effects of specialists on the theory and practice of curriculum making. In the field of education, courses were divided and subdivided until, as shown by Hall-Quest, 60 teachers colleges offered 1,392 courses in education for prospective secondary school teachers and administrators. The greatest number of different education courses offered by one institution was 126.<sup>26</sup>

In 1931 Sayers discussed this phase of curriculum making as follows:

There has been a tendency in professional schools for teachers to bring together activities and studies that customarily have been kept separated. The noted attempts to break down lines of division among highly specialized courses are, in the opinion of the writer, indications of a growing conviction that activities carried on in isolation are likely to interfere with the development of a wholesome professional outlook. . . .

The serious matter, though, is not the fact of duplication, but the fact of separate and isolated dealings with specific bits of subject matter which prohibit critical concern on the part of students over what their courses are doing for them. The professional development of a teacher

<sup>24</sup> *Ibid.*, p. 59.

<sup>25</sup> Charles H. Judd, "Preparation of School Personnel," p. 87, 1938.

<sup>26</sup> A. L. Hall-Quest, *Professional Secondary Education in Teachers Colleges*, p. 76, 1925.

is not an additive process. Professional learning should be so directed that each learning means a genuine reconstruction of previously acquired powers.<sup>27</sup>

Kilpatrick in commenting on professional curricula has stated, "Professional education must hold as its central and dominating feature the building of an inclusive and criticised outlook on life and education."<sup>28</sup>

*The Thirty-Eighth Yearbook of the National Society for the Study of Education* emphasizes the necessity of recognizing the whole child through unified curriculum content:

The interrelation of the various fields and their common relation to the child's developmental readiness should be obvious to any teacher or curriculum maker. Over and over again, the factors of physiological material, mental age and its possible sub-divisions in terms of maturation of the various mental functions, and the experiential background of the child have been discussed as having a direct bearing upon the readiness of the child for any given experience or type of learning. The factors affect everything the child undertakes.<sup>29</sup>

In one sense, to take account of child development adds tremendously to the work and responsibility of the teacher. No longer does she merely need to know her subject matter and some good general methods and texts. Instead, she needs to know as much as she can possibly learn about each child whom she is trying to guide, about his physical maturity, his mental development, his past experiences, his interests and his needs, and the demands society is going to make upon him. She needs to have the type of class organization that provides for individual work, for small flexible groups, each carrying on more or less independently of others, and for class activities that make the variety of experiences and developmental levels in her room a stimulating and enlarging factor in the children's lives. The teacher's knowledge, resourcefulness, energy, and insight are called upon to the utmost.<sup>30</sup>

Perhaps this same theory should apply to students in teacher education.

It should be noted that ten of the studies or reports quoted above

<sup>27</sup> E. V. Sayers, "Education Courses," *Educational Administration and Supervision*, 17: 287-293, 1931.

<sup>28</sup> W. H. Kilpatrick, *The Educational Frontier*, p. 262, 1933.

<sup>29</sup> Carleton Washburne, "Some Theoretical and Practical Implications of the Data on Development," *Thirty-Eighth Yearbook, National Society for the Study of Education*, Part I, p. 391, 1939.

<sup>30</sup> *Ibid.*, p. 394.

represent a composite of the judgments of experts in the field of teacher education.

The following criteria have been derived from the quotations presented thus far in this chapter:

1. Prospective secondary school teachers should be equipped to gain an understanding of the pupils to be taught.
2. Prospective secondary school teachers should know the approved principles and methods of teaching under various situations in a junior or senior high school.
3. Prospective secondary school teachers should have an adequate understanding of the principles and techniques of guidance.
4. Prospective secondary school teachers should have an adequate understanding of the aims, organization, and community relations of a modern junior or senior high school.
5. Prospective secondary school teachers should be given opportunities to apply their theories of teaching and to gain the basic skills of teaching and of managing in classroom situations. This principle includes practice in the use of mechanical aids.
6. Prospective secondary school teachers should have an adequate understanding of educational tests and measurements and of the essential statistical means of interpreting observations and tests.
7. Prospective secondary school teachers should have an understanding of and practice in making and interpreting plans and programs of instruction.
8. Prospective secondary school teachers should acquire "a guiding philosophy of education and life."<sup>81</sup>

#### INTRODUCTION TO EDUCATION

As early as 1920 Bagley made the following recommendations in reference to a course in introduction to education:

In all professional curricula on the collegiate level there should be an introductory course preceded or paralleled by a course in biology, and

<sup>81</sup> E. S. Evenden, "What Is the Essential Nature of an Evolving Curriculum of a Teachers College?" *Seventeenth Yearbook, American Association of Teachers Colleges*, p. 11, 1938.

closely related to the student's participation in the work of teaching. This course should furnish a bird's-eye view of the teacher's task, and . . . might well be termed an "Introduction to Teaching" rather than an introduction to psychology. Aside from an initial effort to define in simple and concrete terms the problems of teaching it would be largely psychological in its character, very concrete and "practical" in its content, and concerned with such topics as instincts, habits, laws of learning, technique of study, and the significance of individual differences—topics that have a definite application to classroom teaching.<sup>32</sup>

Such introductory courses were not noted by Deyoe in his study of education prescriptions in teachers colleges until 1922. At this time 9 per cent of 23 teachers colleges had introduced courses in introduction to teaching or education. Ten years later 63 per cent of a group of 30 colleges had introduced such courses.<sup>33</sup> The author of this study of curriculum trends states that "The course in introduction to teaching seems to have emerged as a result of the accumulating body of material in the field of education and the resulting feeling that an initial overview would be helpful in orientating the student for further professional study."<sup>34</sup>

Table XIII shows that courses under the general heading of introduction to education were required 19 times in 1928 and 18 times in 1938. Eight different titles were used in 1938, including social interpretation of education, education in the social order, introduction to education and conferences, orientation in education, and first course in education, in addition to introduction to education, introduction to teaching, and introduction to secondary education which were used in 1928. The titles which were added during the ten-year period seem to indicate a consciousness of the important responsibility of education in its relation to society and also the advisability of orienting beginning students to education as a field of service. It should be stated that several of the colleges which did not require introductory or orientation courses have tended to provide for somewhat the same service through assemblies, lectures, freshman conferences, and "Freshman Week."

<sup>32</sup> W. S. Learned and W. C. Bagley, *The Professional Preparation of Teachers for the American Public Schools*, p. 182, 1920.

<sup>33</sup> G. P. Deyoe, *Curriculum Practices and Policies*, p. 76, 1934.

<sup>34</sup> *Ibid.*, p. 78.

Also a considerable number of colleges have organized guidance programs which have included group conferences and individual counseling. Furthermore, it has been observed by reference to catalogs that within the past ten years some colleges have combined parts of the work covered in the introduction to education with the broad survey courses, such as survey of civilization and culture or civilization and citizenship. In general, it seems that a great majority of the colleges are providing for some type of introduction or orientation to the general field of education. However, there has been only a slight increase in the total number of semester hours required in prescribed courses.

TABLE XIII

## Course Requirements in Introduction to Education, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Introduction to Education.....	13	10	30	25½
Introduction to Teaching.....	5	2	13⅔	6
Social Interpretation of Education.....	0	1	0	2
Education in the Social Order.....	0	1	0	2
Introduction to Education and Conferences.....	0	1	0	2
Orientation in Education.....	0	2	0	9⅓
Introduction to Secondary Education....	1	0	2	0
First Course in Education.....	0	1	0	2⅔
Total.....	19	18	45⅔	49½

## EDUCATIONAL PSYCHOLOGY

It has been noted under background requirements that nearly one-half of the 55 teachers colleges included in this study required their prospective secondary school teachers to pursue courses in general psychology. Pintner has stated that the early textbooks in educational psychology

followed rather slavishly the conventional order of subjects usually found in the text-books of pure psychology. Thus we find many early educational psychologists and indeed several recent ones, beginning with a

treatment of the nervous system, following on with the discussion of the several senses, then going on to such topics as perception, attention, emotion, memory, imagination, and generally ending with the higher thought process. Frequently applications to education in these topics were difficult to make and often they were very far fetched and had only the remotest connection with education.<sup>35</sup>

Thorndike broke away from these traditions and introduced a study of original tendencies and the modification or development of these tendencies through education.

Applied educational psychology which is adapted to the needs of high school teachers involves an understanding of the normal biological and psychological development of adolescents and also an understanding of the social experiences to which adolescent boys and girls wish to react satisfactorily. This adjustment to social life involves mental hygiene, guidance, and personality development. These subjects have been added to the teachers college curricula.

The curriculum requirements in the field of educational psychology may be noted in Table XIV which lists 25 courses. Nineteen of this number were required 79 times and for 236 semester hours in 1928 and 15 were required 80 times for 225 $\frac{1}{3}$  semester hours in 1938. The average course requirement was 3.0 and 2.8 semester hours respectively. A few courses were listed for 1928 which held over from the normal school or from the time when curricula were devoted to the preparation of elementary school teachers. Child psychology is one of this number and the three colleges which required it are now requiring psychology of adolescents. Two colleges which required psychology of the common school branches made a similar change and the one college which required psychology for teachers has changed to educational psychology. The courses which were required in 1938 and not in 1928 include educational psychology and mental testing, mental hygiene, adolescent psychology and mental hygiene, clinical psychology and individual problems. These added requirements emphasize the importance of understanding individual students and adjusting to their needs.

<sup>35</sup> Rudolph Pintner, *Educational Psychology*, Preface, p. v, 1929.

TABLE XIV

## Course Requirements in Educational Psychology, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Educational Psychology.....	44	45	145 $\frac{1}{2}$	136 $\frac{1}{2}$
Adolescent Psychology.....	7	17	16 $\frac{5}{6}$	42 $\frac{1}{2}$
Child Psychology.....	3	0	10 $\frac{2}{3}$	0
Psychology of Secondary School Subjects.....	2	1	5 $\frac{1}{3}$	3
Psychology of Secondary Education..	1	1	2 $\frac{2}{3}$	2
Advanced Educational Psychology...	6	2	17 $\frac{1}{3}$	8
Educational Psychology for High School Teachers.....	1	2	2 $\frac{2}{3}$	5
Psychology of Exceptional Children..	1	0	2	0
Applied Psychology.....	1	1	1 $\frac{1}{2}$	3
Learning Process.....	2	1	4 $\frac{1}{6}$	2
Psychology of Common Branches....	2	0	5 $\frac{1}{3}$	0
Educational Psychology and Mental Testing.....	0	1	0	2
Adolescent Psychology and Mental Hygiene.....	0	1	0	2
Clinical Psychology.....	0	1	0	2 $\frac{2}{3}$
Psychology and Adolescence.....	1	0	3	0
Psychology and Pedagogy.....	1	0	2	0
Psychology of Learning.....	1	0	2	0
Psychology of Learning in Secondary Schools.....	0	1	0	2 $\frac{2}{3}$
Psychology for Teachers.....	1	0	3	0
Educational Biology and Psychology.	1	0	2 $\frac{2}{3}$	0
Heredity as Applied to Education....	1	0	1 $\frac{1}{3}$	0
Individual Problems.....	0	1	0	4
Individual Differences.....	1	0	2	0
Guidance.....	2	1	6	2
Mental Hygiene.....	0	4	0	8
Total.....	79	80	236	225 $\frac{1}{3}$

A study of the composite group reactions of 1,000 alumnae to the educational requirements at the University of Minnesota shows that the rank order of the courses according to the median index of functioning value placed educational psychology second.<sup>86</sup> The same study shows that the topics which took into consideration individual differences in mental capacity and individual differences

<sup>86</sup> W. E. Peik, *The Professional Education of High School Teachers*, p. 116, 1930.

in school adjustment were regarded as topics having great practical value.<sup>37</sup>

It is significant that two of the leading national organizations, the National Society for the Study of Education and the American Council on Education, have recently given special emphasis to the subjects of individual differences and child nature, signifying thereby increased emphasis upon specialized studies in these fields.<sup>38</sup>

Mental hygiene is a comparatively new requirement. However, in this study of the requirements of 55 colleges, it now ranks as one of the four most commonly required courses in the field of educational psychology. The four courses required most frequently in 1928 were educational psychology, 44 times; adolescent psychology, seven times; advanced educational psychology, six times; and child psychology, three times. In 1938 the four courses most frequently required were educational psychology, 45 times; adolescent psychology, 17 times; mental hygiene, five times; and advanced educational psychology and educational psychology for high school teachers tied for fourth place and were required twice each.

The most notable changes in the requirements in educational psychology have been in the fields of adolescent psychology and mental hygiene. These developments show a trend toward greater differentiation and toward a greater interest in personal adjustment problems. The interest in personal adjustment involves guidance. The treatment of guidance in a separate course has taken an unexpected turn. It was required by two colleges in 1928 and retained by one of them in 1938. The college which dropped the course was requiring nine semester hours in the field of educational psychology in 1928. Since that time it has made marked increases in its background and specialization requirements and combined its psychology requirements into two courses required for four semester hours.

<sup>37</sup> *Ibid.*, p. 107.

<sup>38</sup> "Child Development and the Curriculum," *Thirty-Eighth Yearbook, National Society for the Study of Education*, Part I, p. 442, 1939. *Major Issues in Teaching Education*, American Council on Education, p. 11, 1938.

A sampling of teachers college catalogs to note their guidance offerings shows that 13 out of the 16 college catalogs selected at random listed a course in guidance in 1938 but did not require it. However, personnel and guidance is a service which cannot be rendered entirely by courses. It would commonly include "psychology, biology, hygiene, psychiatry, and some phases of sociology,"<sup>39</sup> and the application of this knowledge in the work of guidance would involve the functions of various officers, specialists, and teachers. Townsend has maintained that "Organized personnel services, including a sound policy of recruitment and selection, are of quite as much importance as are campuses, buildings, curriculums, and laboratories."<sup>40</sup>

## HISTORY, PRINCIPLES, AND PHILOSOPHY OF EDUCATION

### *History of Education*

History of education was the course most frequently required in normal schools at the beginning of the twentieth century.<sup>41</sup> About fifteen years later it occupied second place and by 1930 it had decreased in importance to the point of being approximately last in the list of major education subjects.<sup>42</sup>

In discussing the function of the history of education in the professional preparation of teachers, Bagley stated in 1920:

The direct influence of the history of education would, indeed, be less than that of psychology, but its indirect influence may be far from negligible and its contributions to what we have termed the "professional intelligence" of the teachers are of obvious importance. The instructors in this subject, indeed, lay a large emphasis upon this last-named factor. The function of the study is frankly "interpretative"; its essential outcomes are to be expressed not in increased skill, but in such terms as "interpretative backgrounds," "points of view," "appreciative attitudes," and the like.

<sup>39</sup> G. Watson, D. P. Cottrell, and E. McD. Lloyd-Jones, *Redirecting Teacher Education*, p. 82, 1938.

<sup>40</sup> M. E. Townsend, "The Essential Nature of a Teachers College Student Body," *Seventeenth Yearbook, American Association of Teachers Colleges*, p. 53, 1938.

<sup>41</sup> B. W. Fraser, *National Survey of the Education of Teachers*, p. 60, 1935.

<sup>42</sup> W. E. Peik, *The Professional Education of High School Teachers*, pp. 119, 145, 146, 1930.

It would indeed be unfortunate if the demand for the immediately "practical" should blind one to the importance of ensuring the attitudes and points of view that only a historical study can furnish. Nevertheless, in spite of the fact that many of those opposed to the history of education condemn it simply because it seems to lack immediate utility, there is a serious question as to whether the present organization of the subject in typical normal school courses furnishes the most practicable means of attaining these desired results.<sup>43</sup>

Dawson, in commenting on the value of history of education, has stated:

History of education may be as dull, lifeless, and futile as courses in general history sometimes are. A mere survey of names of educators and types of schools will be of no more value to the prospective teachers than a survey of kings and battles is to a prospective citizen. If it is to be valuable, the course should explain the present educational conditions through reference to their origin and development. If the candidate finds that it is not undertaking to give him this kind of training, he will be wise to drop it. To separate history from philosophy in the study of education is almost as impossible as to separate history from philosophy in the study of politics or economics.<sup>44</sup>

In the study of trends during the past three decades, Deyoe shows that teachers college prescriptions in the field of history of education for secondary school teachers have decreased markedly.<sup>45</sup>

Table XV lists nine courses in the field of history of education which were required in either 1928 or 1938. Seven of this number were required a total of 23 times in 1928 and the same number were required a total of 17 times in 1938. The principal decrease was in the general course in history of education which was required 13 times for 39½ semester hours in 1928 and six times for 14½ semester hours in 1938. The principal increases in requirements were in history of secondary education and in the evolution of the American public schools. The total number of semester hours devoted to the whole field of history of education was 65½ in 1928 and 40½ in 1938, or a decrease of 38.3 per cent. A few col-

<sup>43</sup> W. S. Learned and W. C. Bagley, *The Professional Preparation of Teachers for the American Public Schools*, pp. 185-186, 1920.

<sup>44</sup> E. Dawson, *Teaching the Social Studies*, pp. 372-373, 1928.

<sup>45</sup> G. P. Deyoe, *Curriculum Practices and Policies*, p. 76, 1934.

TABLE XV

Course Requirements in History of Education, Principles of Education, and Philosophy of Education, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
<b>HISTORY OF EDUCATION</b>				
History and Principles of Education....	4	4	11½	7½
History of Education.....	13	6	39½	14½
History of Secondary Education.....	1	2	3½	5
History of Education in United States.....	2	1	4½	2½
Development of American Schools.....	1	0	2½	0
Evolution of American Public School..	0	2	0	4
History and Principles of Secondary Education.....	1	0	2	0
Education in the United States.....	0	1	0	2½
Rhode Island Education.....	1	1	2	4
	23	17	65½	40½
<b>PRINCIPLES OF EDUCATION</b>				
Principles of Education.....	2	1	5½	2
Principles of Elementary School Teach- ing.....	1	0	2½	0
Principles of High School Teaching....	3	2	7½	6
Principles of Secondary Education....	10	18	26	47½
Principles of Teaching.....	9	3	23	7½
Advanced Principles of Education....	1	0	2	0
Principles of Education (general)....	9	2	27	5
Principles of Teaching and Class Man- agement in High School.....	1	1	2½	2½
Principles of Teaching and Develop- ment in Educational Theory.....	1	0	2½	0
Principles and Development of Educa- tional Theory.....	0	1	0	2½
Principles of Teaching as Related to Tests and Measurements.....	1	0	2	0
	38	28	101½	72½
<b>PHILOSOPHY OF EDUCATION</b>				
Philosophy of Education.....	5	14	13½	41½
Ethics of the Profession.....	2	1	1½	4
Principles and Philosophy of Education	1	1	2½	2
*Philosophy of Education with Demon- stration and Conferences.....	0	1	0	6
	8	17	17½	53½
Total.....	69	62	184½	167½

leges dropped history of education from their education requirements and made no substitute. Others changed the requirement to philosophy of education.

### *Principles of Education*

Deyoe has referred to principles of education as being the last of eight courses derived from the original course in the theory and art of teaching.<sup>46</sup>

Bagley has presented the following discussion of the evolution of principles of teaching:

The term "general method" has an interesting history. In American normal schools from 1879 to 1890, instruction in the techniques of teaching was based upon such books as White's *Pedagogy* and Fitch's *Art of Teaching*. These are in the main simple compilations of the rules that long experience in classroom work has established. They were most serviceable books in their day, and the general type of handbook that they represent is still useful as a guide to young and inexperienced teachers. Such books, however, are essentially empirical in their character, for while they sometimes attempt to justify the practices that they recommend upon the basis of general principles, the latter are usually little more than palpable truisms. Courses based upon such materials are far from satisfactory in classes above the secondary level.

The development of "general method" constituted in American pedagogy the first significant step away from this rule-of-thumb procedure and toward the development of a consistent and unified theory of teaching. A "general" method of teaching, obviously, is a method that may be applied to any given teaching task; it is a procedure of universal validity. The Herbartians believed that they had found this in the five "formal steps". . . .

Modern developments in psychology, particularly as influenced by the theory of evolution and by the experimental method, also began at about this time to affect the professional courses in the normal schools and colleges. The cult of "child study," which assumed the evolutionary point of view, tended to shift the emphasis in professional training from the subject matter, where the Herbartian doctrines placed it, to the child and to the development of his body as well as his mind. . . .

The Herbartian sway lasted in Missouri until about 1905, and still persisted in some of the schools in the name of the course, "general method." But the content of this course has been greatly modified, and

<sup>46</sup> *Ibid.*, p. 77.

the term "principles of teaching," a much more appropriate designation, has largely replaced the older name. . . . A little later the influence of John Dewey began to be felt in the courses in principles of teaching, especially in the emphasis placed upon teaching through "problems" and "projects," and in the importance attached to the "socializing" features of both subject-matter and methods of teaching.<sup>47</sup>

As the courses became less empirical and more rational and scientific, they led away from the study of rules, devices, and prescribed procedures to a discussion of the aims, values, and recognized procedures in education. The Missouri teachers of 1920 might have considered such courses less practical though more fundamental.

Deyoe, in his study of curricula for secondary school teachers, shows that prescriptions in the general course of principles of education decreased from 1902 to 1932 and that prescriptions in the principles of secondary education began in 1922 and increased rapidly.<sup>48</sup>

Reference to Table XV shows that there has been a decrease in prescriptions in principles of teaching and a marked increase in prescriptions in principles of secondary education. The course in principles of education which was found to be of a general nature, not differentiated, has been replaced by courses which apply to secondary education. Other courses of a general nature and courses which obviously carried over from the normal school or elementary curricula have decreased in number. Of the 38 course requirements in 1928, only 14 were distinctly for secondary school teachers. In 1938, 21 out of 28 were distinctly for secondary school teachers and the same number were in the field of principles of education rather than principles of teaching. In general, the number of times courses in the principles of education were prescribed has decreased from 38 to 28, or 26 per cent. This may be explained by the fact that there has been a decrease in the total requirement in all education courses, and also it may be assumed that the increases in such fields as philosophy of education, secondary education, introduction to teaching, and student teaching may be due to the fact

<sup>47</sup> Learned and Bagley, *op. cit.*, pp. 187-189.

<sup>48</sup> Deyoe, *op. cit.*, p. 76.

that, because of possible duplication, they have taken over the majority of the topics common to courses in principles of education.

### *Philosophy of Education*

Courses in the fields of special methods, general methods, and principles of teaching may be rated as of importance to classroom teachers because they often attempt to tell teachers what to do and how to do it. Courses in the field of philosophy of education aim to prepare teachers to think constructively about the problems of education and to help in formulating educational policies. The following point of view expressed by Russell is of interest:

It has been stated that we have no clear-cut philosophy of education. I think we have; and it came from parents. The American people build and support schools to give their children a chance to develop their capabilities to the utmost, to put them in that position in life where they can do the most good or exercise the most influence or enjoy the greatest affluence, according to the ideal of the parent in question.<sup>49</sup>

Counts, in concluding his report on the *Senior High School Curricula*, discussed the trends and philosophy in secondary education as follows:

This situation suggests a fundamental need in the reconstruction of the curriculum. The high school teacher lacks professional training. As a rule, except as he has been concerned with the methods and materials of his own subject, he has displayed little interest in the problems of the curriculum. The training which he has received has been training in the subject matter of the academically minded specialist. He has given little thought to the adaptation of subject matter to the purpose of bringing about desirable changes in the behavior of children and in social life. His energies have not been directed toward the development of a comprehensive philosophy of secondary education and of the high school curriculum.<sup>50</sup>

The courses prescribed by the 55 teachers colleges may be noted in Table XV. A total of four courses was required eight times for 17½ semester hours in 1928 and 17 times for 53½ semester hours in 1938. The course called philosophy of education received by

<sup>49</sup> W. F. Russell, *Report of the Dean of Teachers College*, p. 13, 1936.

<sup>50</sup> G. S. Counts, *Senior High Curriculum*, pp. 148-149, 1926.

far the greatest amount of emphasis. The course in principles and philosophy of education signifies a trend toward giving added professional emphasis. However, still greater professional emphasis is signified in the course called philosophy of education with demonstrations and conferences.

There was a 160 per cent increase in the number of colleges requiring work in the field of philosophy of education in 1938 over 1928. The total number of semester hours required increased 213.5 per cent during the same period. This increase seems to be a response to the suggestions and criticisms which were stated above.

It should be noted that a few teachers colleges have recently placed their courses in the philosophy of education in the last year of the college program of studies, thereby providing for an integrated and functional philosophy of education based upon varied points of view gained during the first three years and frequently through teaching experience.

#### EDUCATIONAL SOCIOLOGY

Sociology may be thought of as a study of social groups, processes, and values. Education itself comprehends each of these fields of study. In fact, it is a major process of society. To a considerable degree, therefore, educational sociology seems to be an attempt to define and present the major problems of education. As a curriculum requirement, its content naturally overlaps the content in such courses as introduction to education, educational psychology, social studies, history of education, principles of education, philosophy of education, and aims and organization of education. It seems that because of its point of view, breadth, and importance, it might well serve the purpose of integrating into one large unit course the social theory of education as applied to the materials and procedures of teaching. Judging from professional literature, educational sociology is of primary importance. Judging from teachers college practice, its content is ever present, its treatment is repetitious, and there is little evidence of systematic and comprehensive work in its field.

In 1928 two courses, called educational sociology and school and society, were required nine times and for a total of  $24\frac{2}{3}$  semester hours. In 1938 two courses, educational sociology and sociological foundations of the curriculum, were each required once and for a total of  $4\frac{2}{3}$  semester hours.

Peik's study shows that educational sociology was ranked sixth in a list of seven education courses both as to practical value and as to general value,<sup>51</sup> and there was a high degree of overlapping of its topics with those of other education courses.<sup>52</sup>

The practical value of sociology depends somewhat upon the extent to which it deals with real social situations. However, when public education deals with vital social problems it becomes involved in controversial issues. Social authority outside of the school often devitalizes the study of functional sociology and tends to restrict it to the realm of a pure science. Such action has, according to Ellwood, tended to reduce requirements in this field.<sup>53</sup>

#### SECONDARY EDUCATION

The general title of secondary education seems to include a variety of topics or problems. In fact it is a most inviting title for a course which might show some tendency to integrate the various interests and activities of a prospective secondary school teacher.

Reference to Table XVI shows that as a course title, secondary education was used five times in 1928 and 11 times in 1938. The number of semester hours devoted to it increased from 19 to  $41\frac{2}{3}$ . Other similar titles, such as fundamentals of secondary education, high school problems, practicum in secondary education, problems in high school education, were required a total of six times in 1938 and for 16 semester hours. It may be noted that in 1938 a total of  $69\frac{2}{3}$  semester hours, or 80.7 per cent of the total number of semester hours prescribed, referred definitely to the field of secondary education. Secondary education and high school problems

<sup>51</sup> W. E. Peik, *The Professional Education of High School Teachers*, p. 78, 1930.

<sup>52</sup> *Ibid.*, pp. 43-44.

<sup>53</sup> C. A. Ellwood, *Social Education in the United States*, pp. 258-259, 1930.

were required in 1928 and for a total of  $24\frac{1}{2}$  semester hours. Hence, there was an increase in differentiated courses from  $24\frac{1}{2}$  to  $57\frac{2}{3}$  semester hours, or 135.4 per cent.

TABLE XVI

## Course Requirements in Secondary Education, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Secondary Education.....	5	11	19	$41\frac{2}{3}$
Secondary Curricula.....	3	4	$6\frac{2}{3}$	10
Teaching in Secondary Schools.....	0	1	0	2
The Junior High School.....	5	0	14	0
Fundamentals of Secondary Education..	0	1	0	4
High School Problems .....	2	2	$5\frac{1}{6}$	6
Extracurricular Activities.....	1	1	2	$2\frac{2}{3}$
Modern Problems.....	1	0	3	0
Practicum in Secondary Education.....	0	1	0	2
Problems in Education in New Mexico..	0	1	0	2
Problems of High School Education.....	0	2	0	4
Curriculum Materials.....	0	1	0	3
Studies in Modern Education.....	0	1	0	2
Education.....	1	0	2	0
Curriculum Organization.....	1	0	3	0
Introduction to Curriculum-Making.....	1	0	2	0
Psychology and Education.....	0	1	0	10
Total.....	20	27	$56\frac{5}{6}$	$89\frac{2}{3}$

The course in the junior high school was required 5 times in 1928 and discontinued during the ten-year period which followed. This may be due to the fact that ten years ago several teachers colleges prepared junior high school teachers only and, furthermore, the tendency to differentiate between preparation for junior and senior high school teaching has decreased in this and other courses. This tendency has also been noted by Floyd and Deyoe.<sup>54</sup>

Courses in curriculum-making were required six times in 1928 and 1938 for  $13\frac{2}{3}$  and  $15\frac{2}{3}$  semester hours respectively. Teachers college courses in this field are comparatively new, as is shown by

<sup>54</sup> O. K. Floyd, *The Preparation of Junior High School Teachers*, p. 20, 1932. Deyoe, *op. cit.*, p. 76.

Deyoe.<sup>55</sup> It may be expected that requirements in this field may be increased either in separate courses or in general courses in accordance with the increased demands for materials adapted to the interests and needs of individual communities, groups, and students.

The total requirements in all courses classified under secondary education show a 33.3 per cent increase in number of courses prescribed in 1938 over 1928; a 35.0 per cent increase in number of times prescribed courses were required; and a 57.2 per cent increase in the number of semester hours required. The average course requirement has increased from 2.8 to 3.3 semester hours, or 14.8 per cent.

Two interesting and important illustrations of broad unit courses in secondary education which have developed since 1928 are in operation in Albany and Milwaukee.<sup>56</sup> Both colleges now require ten semester hours of integrated work. These courses are introduced by educational psychology and carried on to student teaching.

#### TECHNIQUES OF TEACHING

Courses in the theory and art of teaching, pedagogy, and general methods were among the first offered by the teacher education institutions. They were designed to be of immediate practical value in that they prescribed or offered methods to be followed and skills to be attained. As the curricula for the education of teachers increased in length and prospective, teachers became more resourceful, prescribed methods were subjected to criticism. Furthermore, studies in the fields of psychology and sociology pointed out the fallacies in formal and routine methods of teaching children and meeting social needs. Modern courses in methods are more particularly courses in the principles of teaching as applied to subject fields and age levels. Notably on the secondary level, formal procedures, or "bags of tricks," have been superseded by

<sup>55</sup> Deyoe, *op. cit.*, p. 76.

<sup>56</sup> Catalog, New York State College for Teachers, Albany, N. Y., pp. 45-46, 1938. Catalog, State Teachers College, Milwaukee, Wis., pp. 67-68, 1938.

studies of experimentation and research in fields of instruction.

Table XVII shows the 33 titles listed under techniques of teaching. These titles may be classified roughly under the headings of techniques of teaching in secondary schools, general courses in techniques, special methods, and composite courses.

Courses which dealt with techniques of teaching in secondary schools indicate a definite effort toward differentiation. There were 14 courses of this type offered in 1928 for  $40\frac{1}{2}$  semester hours. In 1938, 16 courses were offered for a total of 42 semester hours. Other special adaptations to work in the secondary field may be noted under special methods where there was a slight increase in the number of courses required, from 30 to 32, and a slight decrease in the number of semester hours required, from  $81\frac{1}{2}$  to 78. The principal requirement in this field bore the title of "teaching of the major" and required over two-thirds of the total prescriptions in the field of special methods.

The so-called composite courses include such subjects as methods and management, and methods and measurements. The requirements in composite courses were few but have shown a considerable increase during the ten-year period. The principal decrease in course requirements may be noted in connection with the general courses in techniques. Under this heading are included such courses as problems and techniques of teaching, general methods, theory of teaching, and theory and practice of teaching. There were 13 courses required in 1928 for  $42\frac{1}{3}$  semester hours. In 1938, the number of such courses had been reduced to eight and the number of semester hours required to  $20\frac{1}{3}$ . This reduction of more than 50 per cent may be accounted for by the fact that the requirements in the total list of courses under the general heading of techniques of teaching have decreased and that a part of the emphasis given to the general courses has been transferred to differentiated courses in techniques of teaching in secondary schools, to the composite courses and the miscellaneous courses, such as visual aids and research methods.

In general it may be noted that the total number of times courses in the techniques of teaching were prescribed, increased from 57 in 1928 to 61 in 1938. However, the total number of semester hours

TABLE XVII

## Course Requirements in Techniques of Teaching, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Conduct of High School Teaching.....	1	0	3½	0
Techniques of High School Teaching.....	2	7	5	17½
Principles and Techniques of Teaching in Secondary Schools.....	2	4	8	10½
High School Teaching.....	2	1	4⅔	3
High School Methods.....	2	1	5½	2½
High School Instruction.....	1	0	3	0
Techniques of Instruction.....	1	1	2	2½
Methods of Teaching in High School.....	4	0	10⅔	0
Techniques in Junior High School.....	0	1	0	2
Organization of Materials.....	1	0	2	0
Introduction to Student Teaching.....	0	1	0	2
Curriculum Materials—Their Selection and Adaptation.....	0	1	0	3
High School Methods (Seminar).....	0	1	0	3
Methods and Curriculum.....	1	0	6	0
Problems and Techniques of Teaching.....	1	1	2	3
General Method.....	4	1	10	3
Methods and Management.....	0	1	0	2
Methods and Measurement in High Schools.....	0	1	0	3½
Theory of Teaching.....	1	1	2	2
General Principles and Method.....	1	0	2½	0
Methods and Observation.....	2	1	4⅔	2½
Techniques in Elementary Grades.....	0	2	0	5
Theory and Practice of Teaching.....	1	0	10	0
Research Methods.....	0	1	0	2
Visual Aids.....	0	2	0	2
Special Methods.....	1	0	3½	0
Methods in Physical Education.....	0	1	0	2
Methods in Music.....	0	1	0	2
History and Methods in Mathematics.....	0	1	0	2
Teaching of the Major.....	22	21	56½	48
Materials and Methods in Major.....	1	1	2	2
Methods in Major and Minor.....	1	2	3	9
Methods in Minor or Minors.....	5	5	16	13
Total.....	57	61	163½	149½

required decreased from  $163\frac{1}{3}$  to  $149\frac{1}{3}$ , a decrease amounting to 8.6 per cent. The principal decrease was in general courses in techniques. However, a slight decrease is noted in special methods. Increases were made in courses which dealt with the techniques of teaching in secondary schools, the composite courses, and the few miscellaneous courses.

#### ORGANIZATION, MANAGEMENT, AND ADMINISTRATION

School management is one of the traditional courses evolved from the original course in the science and art of teaching. As pointed out by Learned and Bagley, there is a question as to whether it should be taught as a separate course:

In the first place, is the distinction between management and teaching a valid distinction? Does not this very practice of treating the techniques of teaching and the techniques of management in separate courses leave with the student the impression that his later work will be of two distinct types rather than the conviction that good teaching always evolves good management.

Excellent teaching may in itself solve some of the problems of management, particularly those concerned with discipline, but the best teaching cannot compensate for unhygienic classroom conditions, for badly arranged daily programs, or for wasteful and inefficient routine. A separate treatment, however, does not necessarily mean a separate course.<sup>57</sup>

Work in the field of school management might reasonably be combined with student teaching.

Deyoe's study of prescriptions in teachers college curricula for secondary school teachers shows the following decreases in the number of colleges requiring school and class management: 69 per cent of a total of 13 colleges required this subject in 1912-13; 26 per cent of 23 colleges in 1922-23; and 17 per cent of 30 colleges in 1932-33. During the same periods there was little change in the number of times school organization and control were required.<sup>58</sup>

Table XVIII lists 24 courses in the general field of school organization, management, and administration. Of the courses listed

<sup>57</sup> Learned and Bagley, *op. cit.*, p. 191.

<sup>58</sup> Deyoe, *op. cit.*, p. 76.

19 were required a total of 33 times in 1928 and 12, a total of 21 times in 1938. The total number of semester hours required decreased from  $88\frac{2}{3}$  to  $49\frac{2}{3}$ , or 44 per cent. The only significant

TABLE XVIII

Course Requirements in Organization, Management, and Administration, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
High School Management.....	2	0	5	0
School Management (general).....	3	2	8	6
School Organization and Administration (general).....	1	0	$2\frac{2}{3}$	0
High School Organization and Administration.....	2	0	$5\frac{2}{3}$	0
School Administration.....	5	2	$15\frac{2}{3}$	$4\frac{2}{3}$
High School Administration for Teachers.....	2	4	5	$10\frac{1}{2}$
High School Administration.....	1	1	2	3
Supervision of Instruction.....	1	1	3	2
Administration of Secondary Instruction.....	1	0	3	0
Administration and Supervision.....	3	0	8	0
Classroom Management and Educational Measurements.....	1	0	$2\frac{2}{3}$	0
Junior High School Organization.....	0	1	0	$1\frac{1}{2}$
Classroom Management.....	3	1	8	$2\frac{2}{3}$
School Hygiene.....	1	0	2	0
School Management and Law.....	1	0	2	0
School Economy.....	1	0	3	0
Aims, Organization, and Development of the Junior High School.....	2	0	6	0
Aims and Organization of Secondary Education.....	1	3	3	8
Oklahoma School Law.....	0	1	0	2
Public Education in Michigan.....	0	2	0	$5\frac{1}{3}$
History and Organization of Education in Pennsylvania.....	1	0	2	0
School Law and Records.....	0	1	0	2
School Law.....	0	2	0	2
Government—School.....	1	0	2	0
	33	21	$88\frac{2}{3}$	$49\frac{2}{3}$

increases were in courses especially designed for secondary school teachers and in the fields of organization and administration. The semester-hour requirements in school law remained unchanged.

Course requirements which emphasized school management decreased from  $34\frac{1}{3}$  semester hours to eight semester hours, or 76.7 per cent. The other major decreases were in general courses or in those courses not designed especially for secondary school teachers.

#### TESTS AND MEASUREMENTS

The use of standardized educational tests depends somewhat upon a decision as to whether or not there is a definite body of subject matter which constitutes education. Insofar as intelligence and aptitude tests may aid in understanding the nature and development of the individuals to be educated, their use may be quite unlimited. The testing movement is comparatively recent. "It was not until after the war that the newer methods of objective measurement were generally used in the construction of examinations on the secondary and higher levels, and standardized tests in high schools have gathered momentum until at present there is a sizable body of material and of techniques available."<sup>59</sup>

In discussing the measurement of school achievements Buckingham has said, "The opportunity to measure success in the learning and teaching of these subjects—an opportunity which the test movement has brought to us—enormously increases the range and variety of accessible problems. The lack of convincing means of measurement until very recent years may account for the fact that so many apparently simple problems remain unsolved."<sup>60</sup>

Out of the total of seven courses listed, three were required 19 times in 1928 and all were required a total of 31 times in 1938. The increase in the total number of semester hours required was from 49% in 1928 to 73% in 1938, or 48.1 per cent. The courses required in 1938 which were not required in 1928 include educational measurements for high school teachers, high school tests, intelligence testing, and statistical methods in education. Though the courses in statistical methods are commonly based upon the application and interpretation of tests and measurements, their

<sup>59</sup> P. M. Symonds, *Measurements in Secondary Schools*, Preface, p. V, 1927.

<sup>60</sup> B. S. Buckingham, *Research for Teachers*, pp. 374-375, 1906.

content goes beyond the ordinary courses in tests and measurements. The requirements in statistics may not be adequately represented in Table XIX. It may be that some introductory work in this field is carried on by nearly all institutions either in separate courses or in connection with courses in educational psychology.

TABLE XIX

## Course Requirements in Tests and Measurements, 1928 and 1938

Course	Times Required		Semester Hours Required	
	1928	1938	1928	1938
Tests and Measurements.....	6	11	16 $\frac{2}{3}$	27
Measurements Educational.....	12	13	31 $\frac{1}{6}$	31
Statistical Methods in Education.....	0	1	0	1 $\frac{1}{3}$
Educational Measurements for High School Teachers.....	0	2	0	5 $\frac{1}{6}$
High School Tests.....	0	1	0	2 $\frac{1}{3}$
Intelligence Testing.....	0	1	0	2 $\frac{2}{3}$
Tests and Measurements in High School..	1	2	2	4
Total.....	19	31	49 $\frac{5}{6}$	73 $\frac{5}{6}$

The general uses of educational tests have been discussed frequently. Some of the common uses are listed as follows: survey and inventory purposes, efficiency of instruction, sectioning and promoting, diagnosis of individual peculiarities, motivation, research.<sup>61</sup>

That the uses of tests and measurements have been widely recognized is shown by Deyoe who reports that 26 per cent of a group of 23 colleges prescribed a definite course in this field in 1922 and that 50 per cent of 30 colleges made the same prescription in 1932.<sup>62</sup> He also calls attention to the fact that courses in tests and measurements "have emerged from educational psychology and are still retained as a part of that course in many institutions."<sup>63</sup>

<sup>61</sup> Rudolph Pintner, *Educational Psychology*, p. 338, 1928.

<sup>62</sup> Deyoe, *op. cit.*, p. 76.

<sup>63</sup> *Ibid.*, p. 78.

## STUDENT TEACHING

The standards of the American Association of Teachers Colleges have been influential during the past ten years and may be held responsible for somewhat uniform requirements in student teaching. The Association set up the following standards for student teaching in 1928:

Each teachers college shall maintain a training school under its own control as a part of its organization, as a laboratory school, for purposes of observation, demonstration and supervised teaching on the part of students. The use of an urban or rural school system, under sufficient control and supervision of the college to permit carrying out the educational policy of the college to a sufficient degree for the conduct of efficient student teaching, will satisfy this requirement.

Student teaching shall be so organized as to lead to a proper initial mastery of the techniques of teaching, and at the same time protect the interests of the children in the training school.

The minimum amount of student teaching required of every graduate of a teachers college shall be ninety hours of supervised teaching.<sup>64</sup>

Only minor changes were made in this standard for 1938. The 90-clock-hour requirement remained the same. Previous to 1928 the student-teaching standard called for as high as 180 clock hours.

In discussing student teaching facilities the National Survey stated,

The provision of practice facilities proportionate in size to the number of student teachers has become increasingly expensive, and sometimes impossible. Normal schools and teachers colleges during the first half of the period maintained secondary school units but they were used chiefly for preparation of students who desired admission to regular college curricula. Later these units were used for practice. In 1927-28 nearly one third of the practice pupils of teachers colleges were not high school graduates.

Ruediger, in a study of the 1895 and 1905 catalogs of thirty-eight normal schools, found that the number of weeks devoted to student teaching increased from 27.5 to 30.2. Walk found that the median number of hours devoted to practice work in twenty-three institutions in-

<sup>64</sup> *Standards*, American Association of Teachers Colleges, p. 3, 1928.

creased from 160.5 in 1905 to 180.3 in 1915. The older normal schools appear to have stressed student teaching more in proportion than the modern teachers colleges. At present, standards of the American Association of Teachers Colleges require a minimum of ninety clock hours; the median amount actually offered is higher. The median number of clock hours of student teaching in 1930-31 reported to the Office of Education was 135 in four year curricula.<sup>65</sup>

Hall-Quest reported in 1925 a median of 96 hours of student teaching by 99 teachers colleges and a median of 53.6 semester hours of observation, or a total of 152.6 semester hours in both observation and teaching. On the whole, the above data indicate that greater emphasis was given to observation and student teaching at the beginning of the century and at least until 1915. Reports for 1925 and 1930 show a gradual decrease toward the requirement of 90 clock hours.

A typical analysis of the activities which constitute student teaching has been stated as follows:

Activities pertaining to the setting in which the teaching and learning process takes place.

Activities concerned with the organization of subject matter.

Activities concerned with the teaching of subject matter.

Activities pertaining to the discipline of pupils.

Activities pertaining to professional growth.

Activities concerned with the organization of the school.

Community activities.

Activities involved in the observation of the training teacher.

Activities involved in conference with the training teacher.<sup>66</sup>

Any definition of student teaching should take into consideration certain variations in practice due to physical facilities, supervision, training teacher load, and provisions for demonstration, experimentation, and research. Evenden has stated that "there are almost as many patterns of practice teaching as there are colleges offering such work."<sup>67</sup> His discussion of the advantages and

<sup>65</sup> *National Survey of the Education of Teachers*, Vol. V, p. 61, 1933.

<sup>66</sup> W. D. Armentrout, *The Conduct of Student Teaching in State Teachers Colleges*, p. 42, 1928.

<sup>67</sup> E. S. Evenden, *National Survey of the Education of Teachers*, Vol. VI, p. 123, 1933.

disadvantages of the four principal patterns <sup>68</sup> should tend to define and direct future practice by teachers colleges.

The present study shows that in 1928, 54 colleges required a total of 370½ semester hours in observation and student teaching, or an average of 6.8 semester hours per college. By allowing one semester-hour credit for 15 clock hours of student teaching it may be noted that the semester-hour requirement for 1928 is equivalent to 102 clock hours. The range in the requirements for 1928 was from a minimum of two semester hours to a maximum of 13½. In 1938 each of the 55 colleges studied required student teaching, and for a total of 379 semester hours. The average semester-hour requirement per college was 6.9 and the average clock-hour requirement was 103½. The range in the requirements was from three semester hours to 14 semester hours. It should be recognized that the semester-hour credits for observation and student teaching are sometimes adopted arbitrarily and frequently are not commensurate with the actual number of clock hours required in student teaching. In accordance with the semester-hour credits actually granted by the 54 teachers colleges in 1928 and the 55 teachers colleges in 1938, an increase of 2.4 per cent in the total requirements may be noted.

E. U. Rugg reported in 1933 an approximate average of six semester hours in student teaching in each of the various major fields of study.<sup>69</sup>

#### SUMMARY

Course requirements in education have been grouped under 11 headings in accordance with their major emphases. Since all courses are concerned with the problems of education, there is, naturally, a common basis of presentation or a degree of orientation accompanying each course or unit of work. For this reason alone it may be said that as the number of courses has increased, there has been a possibility of an increase in the amount of repetition and overlapping. The fact that 55 teachers colleges required

<sup>68</sup> *Ibid.*, pp. 101-117.

<sup>69</sup> *National Survey of the Education of Teachers*, Vol. III, p. 8, 1933.

98 different courses in education in 1928 and 107 in 1938 does not necessarily prove that the amount of overlapping increased. However, it may indicate a possible trend in that direction. (This increase in the total number of courses took place during a period when the corresponding number of semester hours required in education had decreased.)

It has been pointed out that the principle of integration has received major emphasis during the past decade and that a number of colleges have unified closely related materials into fewer and broader courses. The data in column 4, Table XX, show no especially significant general trend in this direction.

It may be possible to distinguish between the courses which aim primarily to provide a "point of view" or "interpretative background" and those which tend to provide skills or procedures of immediate and practical value. Techniques of teaching, student teaching, tests and measurements, and organization and management may fall in the latter class. It may be noted in Table XX that these courses constituted 55.0 per cent of the total semester-hour prescriptions in 1928 and 54.3 per cent in 1938. These figures indicate a slight decrease in the so-called practical requirements and a corresponding increase in courses which provide an interpretative background, such as educational psychology, principles of education, philosophy of education, history of education, introduction to education, educational sociology, and secondary education. Neither class of prescriptions includes free or restricted elective requirements.

Table XX, column 2, shows the number of semester hours devoted to each of the 11 subject divisions. Column 3 shows the actual increase or decrease in semester hours required and the percentage of increase or decrease. Column 4 shows the average number of semester hours required per college and column 5 the percentages which express the part that the subject totals of column 2 are of their respective grand totals including electives. Column 3 is based upon the data in column 2. Column 4 is based upon column 2 and upon the information in Table XXA concerning the number of colleges which required courses in each of the 11 divisions. The data in column 5 are presented to show the relative

importance of requirements for 1928 and 1938. However, the data in regard to subject prescriptions should be considered as expressing minimum requirements since they do not include possible electives in these fields.

TABLE XX

Summary: Education Requirements Used by 55 Teachers Colleges in the Preparation of Secondary School Teachers

Courses	1		2		3		4		5	
	Semester Hours Required		Increase or Decrease in Requirements		Average Semester Hours Required		Per Cent of Total Requirements			
	1928	1938	Semester Hours	Per Cent	1928	1938	1928	1938	1928	1938
Observation and Student Teaching...	370 $\frac{1}{2}$	379	8 $\frac{5}{6}$	2.4	6.8	6.9	26.0	29.7		
Educational Psychology	236	225 $\frac{1}{2}$	-10 $\frac{1}{2}$	-4.5	4.6	4.3	16.6	17.7		
Techniques of Teaching	163 $\frac{1}{2}$	149 $\frac{1}{2}$	-14	-8.6	3.8	3.6	11.5	11.7		
Principles of Education	101 $\frac{1}{2}$	72 $\frac{1}{2}$	-28 $\frac{1}{2}$	-28.1	3.1	2.9	7.1	5.7		
Secondary Education...	56 $\frac{1}{2}$	89 $\frac{1}{2}$	32 $\frac{1}{2}$	57.2	3.5	3.9	4.0	7.0		
Organization, Management, and Administration.....	88 $\frac{1}{2}$	49 $\frac{1}{2}$	-39	-44.0	3.5	2.5	6.2	3.9		
Tests and Measurements.....	49 $\frac{1}{2}$	73 $\frac{1}{2}$	24	48.2	2.5	2.4	3.5	5.8		
History of Education...	65 $\frac{1}{2}$	40 $\frac{1}{2}$	-25 $\frac{1}{2}$	-38.3	3.0	2.7	4.6	3.2		
Introduction to Education.....	45 $\frac{1}{2}$	49 $\frac{1}{2}$	3 $\frac{1}{2}$	8.4	2.5	2.8	3.2	3.9		
Philosophy of Education.....	17 $\frac{1}{2}$	53 $\frac{1}{2}$	-36 $\frac{1}{2}$	213.5	2.1	3.4	1.2	4.2		
Educational Sociology.	24 $\frac{1}{2}$	4 $\frac{1}{2}$	-20	-81.1	2.7	2.3	1.7	.4		
Total, Prescribed Courses.....	1,219 $\frac{1}{2}$	1,185 $\frac{1}{2}$	-33 $\frac{1}{2}$	-2.7	22.2	21.6	85.7	93.0		
Free Electives in Education .....	149 $\frac{1}{2}$	48 $\frac{1}{2}$	-101 $\frac{1}{2}$	-67.6	8.8	4.7	10.5	3.8		
Restricted Electives...	54 $\frac{1}{2}$	41	-13 $\frac{1}{2}$	-24.8	6.1	4.6	3.8	3.2		
Total, Prescribed and Elected....	1,423 $\frac{1}{2}$	1,274 $\frac{1}{2}$	-149	-10.5	25.9	23.2	99.9	100.2		

Reference to Table XX shows that there were decreases in semester-hour requirements in six of the 11 subject fields. The greatest decreases were in the fields of organization and management, 44.0 per cent; principles of education, 28.1 per cent; history of education, 38.3 per cent; and educational sociology, 81.1 per cent. The major increases were in philosophy of education, 213.5 per cent; secondary education, 57.2 per cent; and tests and measurements, 48.2 per cent. The decreases seem to indicate a trend away

TABLE XXA

## Number of Colleges Requiring Various Education Courses

Courses	Colleges Requiring	
	1928	1938
Student Teaching.....	54	55
Educational Psychology.....	51	52
Techniques of Teaching.....	43	41
Principles of Education.....	33	25
Secondary Education.....	16	23
Organization and Management.....	25	20
Tests and Measurements.....	20	31
History of Education.....	22	15
Introduction to Education.....	18	18
Philosophy of Education.....	8	16
Educational Sociology.....	9	2
Free electives in education.....	17	10
Restricted electives in education.....	9	9

from the older types of courses and courses which encourage overlapping. The increase in educational philosophy is in accord with Evenden's recommendation that "Every teacher should have a guiding philosophy both of education and of life."<sup>70</sup>

The rank order of subject fields as noted in column 5 is as follows: observation and student teaching, first place in 1928 and 1938; educational psychology, second place in 1928 and 1938; techniques of teaching, third place in 1928 and 1938. These courses seem to be constants or minimum essentials. Only minor changes have been noted in the semester-hour requirements in each of these during the ten-year period.

Principles of education held fourth place in 1928 and sixth place in 1938. Secondary education, which held fourth place in 1938, was in seventh place in 1928. Organization and management held fifth place in 1928 and eighth place in 1938. History of education held sixth place in 1928 and tenth place in 1938. Secondary education, tests and measurements, and philosophy of education advanced their ranking by three places in 1938. The

<sup>70</sup> E. S. Evenden, "What Is the Essential Nature of an Evolving Curriculum for a Teachers College?" *Seventeenth Yearbook, American Association of Teachers Colleges*, p. 11, 1938. Also, *National Survey of Teacher Education*, Vol. VI, p. 124, 1935.

greatest losses in ranking may be noted in history of education, organization and management, and principles of education.

The statements in regard to the rank order of subjects are based on prescriptions and are considered to be of significance because the act on the part of any college of prescribing courses indicates that as a result of weighing values the courses required were considered necessary or of relatively greater importance than those not required.

The fact that free electives in the field of education decreased from 149½ to 48½ semester hours, or 67.6 per cent, indicates that colleges are giving greater consideration to vocational objectives and deciding what materials are of greatest professional value. The decrease in restricted electives may have less significance since such electives are controlled.

The percentages of prescription in the total field of education have increased from 85.7 per cent to 93.0 per cent, leaving 14.3 per cent for electives in 1928 and 7.0 per cent in 1938. This decrease in electives shows a marked trend toward a clearer definition of the necessary element in education.

Where the total program of teacher education has been influenced by professional objectives, the practice of treating subject matter professionally has increased,<sup>71</sup> thereby making it possible to decrease the amount of time to be devoted to separate education courses. For this or other reasons, the number of semester hours devoted to courses in education has decreased from 1,423⅔ to 1,274⅔, or 10.5 per cent, since 1928. The average number of semester hours required by the 55 colleges has also decreased from 25.9 to 23.2, or 10.5 per cent. The number of semester hours required in education courses, not including observation and student teaching, has decreased from 1,053½ in 1928 to 895⅔ in 1938, or 15 per cent. The average number of semester hours required per college has decreased from 19.1 to 16.3, or 14.7 per cent. *The National Survey of the Education of Teachers* has observed that "Among the teachers colleges, the median amount of work in education and psychology was 16 semester hours, in special

<sup>71</sup> E. S. Evenden, *National Survey of the Education of Teachers*, Vol. VI, pp. 100-101, 1933.

methods four, and in practice teaching seven—a total of 27 semester hours.”<sup>72</sup> Though these data apply to the requirement for the preparation of elementary and secondary school teachers, they indicate a possible reduction in education requirements during the past eight years.

The requirements in education and student teaching by the 55 colleges ranged from 10.5 to 43.5 semester hours in 1928. The mean of the distribution was 26.3, the median was 25.8, and the standard deviation was 7.1. The range in 1938 was from 13.5 to 55.5, or without one extreme case the range would have been 13.5 to 34.5. The mean requirement was 23.8, the median 22.3, and the standard deviation 6.4. If the extreme case were not included, the standard deviation would have been approximately one point lower. It is evident that there was greater agreement as to the number of semester hours which should be required and that the average requirement was decreased slightly more than 10 per cent.

### CONCLUSIONS

1. From a study of courses and course requirements in the field of educational psychology, it seems that there is a trend toward differentiated courses organized to meet the professional needs of teachers in the special field of secondary education. Greater emphasis has been given to the psychology of adolescence, psychology for high school teachers, and psychology of learning in the secondary field. Separate courses in mental hygiene and clinical psychology have been added since 1928. These additions signify a growing interest in individual case studies and pupil adjustment.

There has been no significant change in the total amount of work offered in the field of educational psychology. It seems that the changes which have been made within the general field signify a growing interest in adaptations to professional needs on the secondary level.

2. The requirements in the fields of principles of teaching (general methods) and techniques of teaching have decreased. It is apparent that this signifies a trend away from skill courses.

<sup>72</sup> *Ibid.*, p. 77.

Marked increases have been made in courses such as philosophy of education and secondary education which provide "points of view" or "interpretative background."

3. Along with courses in general methods (principles of teaching) and special methods, decreases have also been noted in organization and management. Modern psychology and philosophy are undoubtedly accountable for changes in attitudes toward courses having to do with skills and routine.

4. It seems that separate courses which provide for discussions of the aims and organization of junior and senior high school education permit overlapping. The total amount of time devoted to such courses has remained about constant. However, the treatment of junior high school problems in separate courses is becoming less common.

5. It is apparent that the teachers colleges recognize the importance of providing opportunities for students to test their educational theories and to develop skill in teaching. Student-teaching requirements have increased during the past ten years and frequent opportunities are provided for observation.

6. Instruments for measuring the results of teaching and the relative value of procedures are commanding an increasing amount of consideration. Marked increases have been made in course requirements in the field of tests and measurements. If an adequate amount of work in educational statistics is not included in this or other related courses, it may be claimed that such work is being neglected.

7. Two trends are apparent which signify that the teachers colleges are formulating more definite professional objectives and clearer definitions of requirements to meet these objectives. One is toward course prescriptions, and the other, a parallel trend, is away from promiscuous choice of electives. Such movements are particularly appropriate to the field of education. Course prescriptions in the total field of education have increased and the requirements in electives have decreased.

## Chapter IV

### *Specialization Requirements for the Preparation of Secondary School Teachers in Teachers Colleges*

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THERE are a number of principles which have a bearing upon the selection and organization of the curriculum requirements for specialization. The quotations in the following pages set forth these principles or criteria.

#### CRITERIA FOR JUDGING SPECIALIZATION REQUIREMENTS

The principle of differentiation has been applied in the academic preparation of high school teachers in a few of the teachers colleges for nearly half a century. However, in referring to the situation in Missouri in 1920, Bagley stated, "Inasmuch as certain normal schools are now engaged in the preparation of high school teachers, it would seem advisable to emphasize clearly in some of the normal schools the principle of differentiation referred to above, that is, definitely modifying all courses with reference to their bearing upon the problem of high school teaching."<sup>1</sup> Hill noted that this recommendation had been adopted in 1925.<sup>2</sup>

Evenden stated in 1933 that, "It is evident that the principle of differentiation in curricula is generally approved by those working directly in the field of educating teachers."<sup>3</sup> "The plan of organization which requires students to select majors and minors is

<sup>1</sup> W. S. Learned and W. C. Bagley, *The Professional Preparation of Teachers for American Public Schools*, p. 152, 1920.

<sup>2</sup> C. M. Hill, *A Decade of Progress in Teacher Education*, p. 137, 1927.

<sup>3</sup> E. S. Evenden, *National Survey of Teacher Education*, Vol. VI, p. 130, 1933.

nearly universal among institutions educating teachers in this country."<sup>4</sup>

Subject matter specialization has been provided in various ways. Many teachers colleges have prescribed one major and one minor field of concentration. Other practices provide two majors, one major and two or three minors, optional majors within a single field, and combined majors and minors within a single field as in science or foreign languages. Though a considerable number of majors may be noted, yet curricula which aim to prepare secondary school teachers are commonly limited by the programs of the schools served. The general pattern in prescribing major fields of specialization was first set up by the liberal arts colleges and adopted by the teachers colleges.<sup>5</sup>

Judd expressed this reaction to the tendency of the teachers colleges to follow the liberal arts pattern:

Literally the worst possible course which the teachers colleges of this country can adopt is to follow in the footsteps of the conventional arts college. The hope of securing respectability by becoming an arts college is one of the most dangerous allurements to which teachers colleges seem to be falling victims. My exhortation to this body is to abandon the traditions of the arts colleges, make a first-hand study of the needs of American schools, invent the curriculum materials which these schools need, prepare for these schools teachers who have a broad outlook and an acquaintance with the larger issues of presentday life, and cultivate the respectability which comes from creative leadership rather than from imitation.<sup>6</sup>

The requirements for the various majors offered in the 66 teachers colleges studied by the National Survey Commission averaged 26 semester hours in 1933. However, the Survey states that "the range in requirements extending from eighteen to eighty semester hours in a major is the matter of serious concern."<sup>7</sup> Such variations in requirements have resulted from departmental control which, in turn, has often resulted in multiplying courses

<sup>4</sup> *Ibid.*, p. 127.

<sup>5</sup> *Ibid.*, p. 128.

<sup>6</sup> Charles H. Judd, "Next Steps in the Improvement of Teacher Training," *Twelfth Yearbook, American Association of Teachers Colleges*, p. 31, 1933.

<sup>7</sup> *Op. cit.*, p. 128.

and instructors and in throwing the total program of studies off balance. In this relation, Evenden has stated that,

If, on the other hand, the curricula for teachers could be based upon a thorough acquaintance with the work that the teachers will be called upon to do, and also the things which they should be able to do in order to improve existing conditions, then the prescriptions could be made in terms of providing the best preparation, regardless of majors and minors, in the time available for the specific kind of position for which the teachers are preparing. This concept of "competency" in the field if used as a basis for constructing professional curricula for prospective teachers, can do much to correct the present limiting effect of the vested interests of departments which so often interfere with the larger purpose of preparing competent teachers.<sup>8</sup>

The general requirement placed before departments of specialization has been stated as follows: "Every teacher should have a broad scholarly mastery of the field or fields to be taught and a supporting knowledge of the most closely related fields."<sup>9</sup> Authorities on teacher education seem to agree with this general statement of aim. The following quotations will deal with recommendations related to this basic principle of specialization.

In the report of the National Society of College Teachers of Education Gray, Stratemeyer, and Alexander recommend that the principle of differentiation be limited in its application:

. . . The fact should be pointed out, however, that differentiation has often been carried much farther than can be justified. As a matter of fact, it has often resulted in a far narrower type of training than the best interests of the teacher and the profession justify. This error should be avoided in the future. The type of differentiation that is here recommended relates only to broad areas and fields, as suggested by the following outline.<sup>10</sup>

. . . Secondary-school teaching in particular fields; (*a*) English, (*b*) social sciences, (*c*) mathematics, (*d*) natural sciences, (*e*) foreign languages, (*f*) special subject teaching (music, fine arts, home economics,

<sup>8</sup> *Op. cit.*, p. 129.

<sup>9</sup> E. S. Evenden, "What Is the Essential Nature of an Evolving Curriculum in a Teachers College?" *Seventeenth Yearbook, American Association of Teachers Colleges*, p. 9, 1938.

<sup>10</sup> W. S. Gray, F. B. Stratemeyer, and T. Alexander, "Principles of Curriculum Construction for the Education of Teachers," *Twenty-Third Yearbook, National Society of College Teachers of Education*, pp. 86-87, 1935.

business education, health education, the practical arts, including vocational education).

The authors state further that

Unfortunately, students who specialize narrowly often fail to interpret broadly what they learn, to see significant relations between important fields, and to understand the application of facts learned to practical problems. As modern life is becoming increasingly complicated, new meaning and significance have been attached to the term specialization. In some institutions it now implies not only depth of penetration into a given field but also breadth of understanding in related fields.<sup>11</sup>

Their concept of breadth of knowledge leads up to their discussion of subject organization as a means of providing breadth:

To the extent that specialized curricula are organized in terms of challenging problems scholarly habits of the type required by teachers will develop rapidly. The organization of subject matter, as such, requires scholarly habits within restricted areas. The reorganization of such a course in terms of its contribution to the solution of fundamental problems requires a much higher type of intellectual effort. Such work requires that students see relationships, recognize the implications of facts, and derive generalizations. Nothing requires a higher degree of scholarship.

While attack on immediate and personal problems within large problem areas is ordinarily more effective, the whole procedure would become merely opportunist if it ended here. Not just to find the solution to a specific problem, but to generalize on the basis of experience in order gradually to evolve principles for the guidance of conduct, is the ultimate goal.<sup>12</sup>

As a means of insisting upon breadth of knowledge and a functional interpretation of knowledge, the authors suggest a revision of the plan of evaluation:

Any plan of evaluation should be such as to emphasize the functional use of the information, abilities, skills, attitudes and interests of the student with respect to his all-round qualifications for teaching rather than to prescribe any predetermined subject matter which is thought to be requisite. It is not intended to minimize the importance of knowledge

<sup>11</sup> *Ibid.*, p. 88.

<sup>12</sup> *Ibid.*, pp. 89-90.

as an essential of the equipment of the teacher, but rather to recognize that knowledge does not insure doing, and that the student's qualifications for teaching should be judged in terms of the assurance that he can and will act effectively. Rather than test specific pre-determined information, evaluations should be directed so as to give the student maximum opportunity to use his information and power in a functional way by setting up problems, situations and issues which demand the application of information, the understanding of principles or theories, and the recognition of the implications of positions taken.<sup>13</sup>

The use of the problem or project method in education is qualified by the statement that "The work provided should be continuous in thought and organization and inherently sequential."<sup>14</sup>

Bagley's point of view seems to be in accord with the above points of view. In the following quotation he refers to any school of thought which does not recognize "the internal relationships of learning-material—logical, chronological, spatial, causal," and which would "retain only that method of learning which consists in applying learning-material in a present situation to meet an immediately-felt need."<sup>15</sup>

No one would contend that there is not a very important place for the kind of learning that is represented by the solution of immediate problems of learning and the realization of immediate purposes. This pattern of learning should dominate the earlier school years and should be abundantly provided for throughout the school and college programs. But to rule out all other types of learning (except perhaps in schools for the feeble-minded) is a proposal which, if carried out consistently, would be a very serious injustice to the normal learner for it would deprive him of many important elements of a liberal education.<sup>16</sup>

Two years earlier Bagley discussed the activity program as follows:

. . . The training institutions, however, will need apparently to reckon with the possible extension of the activity program thruout the elementary and high school, and will demand, I think, a type of training that

<sup>13</sup> *Ibid.*, pp. 99-100.

<sup>14</sup> *Ibid.*, p. 90.

<sup>15</sup> W. C. Bagley, "Is Subject-Matter Obsolete?" *Educational Administration and Supervision*, 21; 401, September, 1935.

<sup>16</sup> *Ibid.*, p. 402.

reflects on the college level at least some features of the activity program itself. The solution that Dr. Alexander and Dr. Stratemeyer are trying in New College combines thorogoeing and systematic courses in subject matter, paralleled by a series of seminars which operate in some measure on an activity basis, and this may prove to be an effective compromise.<sup>17</sup>

In discussing means of evaluating subject matter as taught by specialists on the secondary level, Spaulding states:

The search for pertinent tests led to the somewhat discouraging conclusion that social competence, as such, has apparently been thus far a matter of subordinate concern to makers of tests. Tests of achievement in school history or mathematics or Latin are numerous and comprehensive; tests of the kinds of ability which boys and girls may normally be expected to use day by day outside of school tend to be scarce and fragmentary.<sup>18</sup>

From the beginning, a strong effort was made to avoid narrow attention to separate secondary school "subjects," merely as such. The intent was to investigate, instead, whatever in-school or out-of-school experiences might contribute to pupils' competence in significant fields of activity.

Eight such fields were originally selected as deserving special attention. These comprised the fields of general health activities and physical recreation; social relationships, including civic activities; the use and interpretation of the English language; computation, and the appreciation of quantitative relationships; the application of science both in practical use situations and in interpreting the normal environment; reading for pleasure or profit; the enjoyment of music, art, and the drama; and direct vocational adjustment.<sup>19</sup>

The last paragraph quoted above may be thought of as containing a definition of the "social competence" for which the high school teachers may be held responsible. The following quotations from addresses delivered by Judd and Haggerty before the American Association of Teachers Colleges bear upon this functional concept:

While the schools go on repeating the orthodox round of school subjects, the world at large has introduced thousands of innovations. Life

<sup>17</sup> W. C. Bagley, "What Does the Dominant American Theory of Education Imply for the Redirection of the Professional Education of Teachers?" *Twelfth Yearbook, American Association of Teachers Colleges*, p. 98, 1933.

<sup>18</sup> F. T. Spaulding, *High School and Life*, p. 338, 1938.

<sup>19</sup> *Ibid.*, pp. 352-353.

has become infinitely complex. Social institutions have taken on a wholly new importance. Changes in the industrial system have created new interests and new demands for knowledge.

. . . It ought to be the function of teacher-training institutions to seize every new and interesting item of experience and make it available for the schools.<sup>20</sup>

Unless we are to renounce the function generally accorded to school instruction in the structure, the continuity, and the improvement of civilization, we must gaze with clear vision at the fact which leaps up whenever we inquire how the school is to perform its service to society.<sup>21</sup>

The following statement from superintendents of schools defines clearly the place of the teacher in the new school:

From the foregoing analysis of the changes in organization, administration, and curriculum objectives of the new school, it is apparent that new demands will be, and are being, made upon the teacher who is to fulfil its purposes. A type of instruction in which the center of interest lies in the relationship of child to community calls for a teacher who is guide rather than disciplinarian. Such a person will need to be community-minded, to have an increased sensitivity to social and economic changes, and to possess a broad background of familiarity with the social and economic changes, and to possess a broad background of familiarity with the social and economic environment gained from wider reading and larger experience of community life. . . . He must have expert assistance in making these adaptations to the new demands of his profession. The primary responsibility of giving this leadership to the classroom teacher devolves upon teacher-training agencies and upon the administrative officers of public school systems.<sup>22</sup>

In discussing the meaning of "culture" and "liberal education," Kandel has stated that these terms may have fallen into disrepute because of "the intense and narrow specialization of teachers who failed to see education steadily and see it whole."<sup>23</sup> He also has pointed out that about thirty years ago the secondary school cur-

<sup>20</sup> Charles H. Judd, "Next Steps in the Improvement of Teacher Training," *Twelfth Yearbook, American Association of Teachers Colleges*, p. 26, 1933.

<sup>21</sup> M. E. Haggerty, "A Program of Development in the Education of Teachers," *Twelfth Yearbook, American Association of Teachers Colleges*, p. 33, 1933.

<sup>22</sup> *The Improvement of Education, Fifteenth Yearbook, Department of Superintendence, National Education Association*, pp. 147-148, 1937.

<sup>23</sup> I. L. Kandel, *History of Secondary Education*, p. 536, 1930.

riculum was strongly academic and "amassing information was synonymous with education."<sup>24</sup>

After nearly twenty-five years of groping and experimenting we stand at the beginning of a new era both in curriculum and in methods. The problems stand out more clearly than they did ten years ago, not only in this country but in all parts of the world where people are giving serious thought to the education of the next generation. Today not only the United States but the whole civilized world is an experimental laboratory in education.<sup>25</sup>

In the final paragraph of his essay on "New Tendencies in Education" Kandel characterized the current movement as

. . . a protest against the notion that knowledge alone is power. Knowledge itself is no more productive than money that lies idle in a hoard. It must be put to work; it must be used as a vehicle for the cultivation of active, purposeful, creative personalities, bringing out the best in each individual in tune with the needs of a progressive society. The school must develop personalities able to use knowledge for gaining and reconstructing experiences, active, sensitive, sympathetic, critical but tolerant, inspired with a sense of civic and social responsibility, because trained to appreciate the meaning of social living, full of understanding for the world and society of which they form a part,—in a word the good citizen in the highest sense of the word.<sup>26</sup>

Peik has discussed the problem of personality development as an objective of education as follows:

If the teacher is to assume the role of guide and counsellor in the development of pupil personalities, he must understand the principles and conditions of human development. And he must live his own high culture on a functional basis, in the practice of his profession, and in his life outside of school. Similarly, if he is to exercise leadership in promoting social progress, the teacher's own education must make him more conscious of social needs and problems, and develop in him informed attitudes concerning them. As representative and bearer of the culture and social intelligence he would develop in others, he must himself be adequately and appropriately educated.<sup>27</sup>

<sup>24</sup> I. L. Kandel, *Essays in Comparative Education*, pp. 82–83, 1930.

<sup>25</sup> *Ibid.*, p. 83.

<sup>26</sup> *Ibid.*, pp. 94–95.

<sup>27</sup> W. E. Peik, *The Improvement of Teacher Preparation*, Educational Policies Commission Report, National Education Association, pp. 12–13, 1938.

The following quotations define the same author's concept of what should be required by way of specialization:

The differentiated preparation of teachers for secondary instruction in typical American high schools calls for broad specialization in teaching fields such as science and social studies, rather than extremely specialized preparation in single subjects such as chemistry or history. More advanced courses paralleling in part the more advanced cycles of areas to be taught in the high school should be studied beyond the content of general education. Appropriate advanced preparation in at least two broad fields must usually be secured because nearly two-thirds of all secondary teachers of the United States give instruction in two or more broad fields and because practically all of the others begin their careers in small high schools. The work might well be in related fields such as science and mathematics, English and a language, English and social studies, agriculture and natural science, public health nursing and health instruction.<sup>28</sup>

The quality of scholarly competency necessary in two fields can hardly be secured in less than five years of preparation beyond high school with the master's degree of quality as a standard. . . .

. . . Five years of preparation, with or without a master's degree, has already been attained by three out of ten high school teachers. Few, if any, states need hesitate to proceed towards the five year standard, using reasonable caution to introduce it gradually.<sup>29</sup>

Koos and others, in speaking of the need of a clarification of the purposes of the secondary school and the teachers colleges, have supported the two-three plan of organization.<sup>30</sup> Wilkins would permit specialization to begin in the junior college and upholds intensive or narrow specialization.<sup>31</sup>

It is often claimed that teachers colleges should have clearly defined objectives and that they should set up well-unified programs of instruction to accomplish these objectives. Peik emphasizes these points:

. . . The time has come when institutions which do not integrate all their departments as a common enterprise to educate teachers must be

<sup>28</sup> *Ibid.*, pp. 47-48.

<sup>29</sup> *Ibid.*, p. 48.

<sup>30</sup> L. Koos and others, *The Trend of Reorganization in Higher Education as Affecting the Junior College in Problems of College Education*, pp. 151-152, 1928.

<sup>31</sup> E. H. Wilkins, *The Changing College*, p. 37, 1927.

considered incapable of meeting the challenge of preparing young people for effective teaching service.<sup>32</sup>

This principle of unity is a first essential to teaching as an art. It is the basic principle of all art. To this end the curriculum of the professional school for teachers should have unity of purpose, all phases of the work serving to further the professional objectives.<sup>33</sup>

Pendleton also advocates the unification of courses and activities:

I have . . . stated, as my first positive conclusion regarding content courses in a teachers college, that every subject-matter course should be also a methods course, presenting always the applicability in school of the various materials dealt with.

I think, further, that in self-defense, pertaining to the matter just discussed, teachers colleges are going to have to clean house in their faculties in the subject-matter departments to get rid of three kinds of teachers: those with insufficient scholarship regarding content—who will not do for *college* teachers of any sort; those (perhaps splendid in scholarship) who are essentially unfriendly to education, in the specific sense—who do not understand, or wish to understand, the education courses touching from another point of view their content field; and those who cannot or do not in their daily teaching integrate the attainment of knowledge and the use of that knowledge in the schoolroom as the inseparable parts of a professional grasp of subject-matter. If we harbor purely academic-college teachers, ultimately a part of our courses will be altogether cut off and placed in academic institutions where they will be taught alike to prospective teachers and to students not intending to teach.<sup>34</sup>

At a time when the interests of general education are being advanced, it seems that the requirements in specialization and education must be reduced or the length of the curriculum extended if more time is to be given to general education. Four states, (California, Arizona, Washington, and New York) now require five-year curricula for the certification of high school teachers. However, there are 36 states which have set up through their cer-

<sup>32</sup> Peik, *op. cit.*, p. 32.

<sup>33</sup> *Ibid.*, p. 90.

<sup>34</sup> Charles S. Pendleton, "The Content and Method of Subject-matter Courses in Teachers Colleges," *Addresses and Proceedings, National Education Association*, Vol. 64, p. 862, 1926.

tification of teachers definite requirements in specialization which must be met regardless of other interests. The specialization requirements for 1938 may be summarized as follows:

Four states required one major only, 16 states required a major and a minor only, and six states required a major and two minors. The remaining states either did not set up requirements or their requirements were indefinite. The number of semester hours required in majors and minors by the 36 states ranged from 12 to 60. The mean requirement was 30.6. Six states required more than 45 semester hours. The number of semester hours required for a major ranged from 12 to 30. The mean requirements for majors ranged from 15.7 semester hours in mathematics to 23 in science. The mean requirement for a first minor was approximately 14 and for a second minor approximately 11.8.<sup>35</sup>

The National Survey Commission reported that from one-fifth to one-third of the total college program should be devoted to specialization.<sup>36</sup> The requirements referred to above show the attitude of state authorities in charge of certification toward the amount and kind of specialization by which high school teachers should be certified. Kandel concluded in 1934 that "The qualifications of teachers have been left unstandardized and chaotic."<sup>37</sup>

The most general qualification required is college graduation; since few states grant certificates on the basis of specific preparation, and since college graduation offers no guarantee of strict specialization, candidates are too frequently certificated as high-school teachers without any definite statement of the subjects which they are qualified to teach. In other words, the most general practice is "blanket" rather than subject certification.<sup>38</sup>

In analyzing the data from the present study relative to individual fields of specialization, changes in requirements and possible trends will be noted. Discussions of changes and trends will center around the following criteria which have been derived from the authoritative statements quoted above:

<sup>35</sup> C. E. Jackson, "State Rules and Regulations Covering the Certification of High School Teachers," pp. 9-13, 1938.

<sup>36</sup> *Op. cit.*, Vol. III, p. 69.

<sup>37</sup> I. L. Kandel, *The Dilemma of Democracy*, p. 52, 1934.

<sup>38</sup> *Ibid.*, p. 53.

1. The principle of differentiation should be applied to subject matter requirements in teachers colleges for the purpose of specialization.
2. Specialization should provide for adequate scholarship in the subject or subjects to be taught and margins of subject matter in related fields.
3. Subject matter should present evidence of having greater social significance and functional value.
4. Intensive specialization in narrow fields is seldom justifiable in the preparation of high school teachers.
5. Greater provision should be made for broad fields of specialization and broad courses of instruction.
6. The essential elements of a teaching field should be defined and sufficient prescriptions should be made to insure their inclusion.
7. In order to provide time for adequate specialization and other necessary requirements, the college program should be extended.

#### GENERAL REQUIREMENTS FOR MAJORS

The requirements for specialization in a major field vary although they are generally under control through prescriptions. It has been the common practice for colleges to set up minimum semester-hour requirements for majors in specified fields. If a student wishes to go beyond this minimum requirement his further concentration is frequently limited by a stated maximum. However, a considerable number of colleges mention only the minimum requirement.

There were five colleges in 1928 and three in 1938 which did not specify the minimum or maximum number of semester hours required for an academic major. The range of the minimum requirements was from 16 to  $45\frac{1}{3}$  semester hours in 1928 and from 15 to 32 in 1938. The average minimum requirements increased from 23.4 to 24.1, or 3.1 per cent. The mode for both years was 24. The range of the maximum number of semester hours permitted was from 16 to  $52\frac{2}{3}$  in 1928 and from 20 to 54 in 1938.

The average maximum requirements increased from 29.2 to 32.4, or 10.9 per cent. This increase seems to be due largely to the establishment of broader majors and an interest in more extensive preparation in practically all fields of specialization.

In 1928 there were 26 colleges which made their requirements constant for all academic majors. The range of constant requirements was from 16 to 45  $\frac{1}{3}$  semester hours. The average of 24 semester hours was due largely to the fact that 17 of the 26 colleges required 24 semester hours. In 1938 the range was from 20 to 32 semester hours, the average was practically the same (24.6), and the mode was the same, or 24 semester hours.

A comparison of the minimum requirements and the maximum allowance for academic majors shows that the differences between the two ranged from two semester hours to 20 semester hours for 1928 and 1938, and that the mean of the distributions of difference was 10.1 semester hours in 1928 and 12.6 semester hours in 1938, or an increase of 24.7 per cent. This increase in the means of the differences also tends to show that greater provision has been made for enriching the preparation in the major fields or for allowing greater breadth in majors. Furthermore, it provides greater freedom to individual students who may wish to concentrate further upon certain topics or subjects of special interest or value within their major fields.

It has been noted above that the semester-hour requirements for academic majors vary among the colleges and within individual colleges. The averages of the maximum and minimum requirements show increases from 1928 to 1938 and the average maximum requirement for academic majors in 1938 was 34.4 per cent higher than the average minimum requirement for the same year. For 1928 the average maximum requirement was 25.0 per cent higher than the average minimum requirement. The average semester-hour requirements for the academic majors in 1928 and 1938 may be estimated as falling about midway between the average minimum and the average maximum requirements for the respective years. However, there are so many variable elements that such estimates would be far from reliable. If such figures as approximately 28 semester hours for 1938 and 26 semester hours for 1928

could be recognized as average major requirements in academic fields, then the same general trend would be noted.

The National Survey states that, according to an analysis of 66 teachers college catalogs, the median semester-hour prescriptions for majors were as follows: English 30, mathematics 26, biology 25, modern foreign language 26, Latin 26. The range for the six majors was from 12 to 60.<sup>39</sup> A transcript analysis of 1,000 records shows that the number of semester hours actually taken by English majors ranged from 20 to 59. The median was 33. Other median semester hours of work taken in majors were, mathematics 25, biology 28, modern languages 34, Latin 26, history 27. The range for the six majors was from 12 to 70.<sup>40</sup>

The Survey estimates that from one-fifth to one-third of the total amount of the four-year curricula was devoted to majors. "In the comparison of the catalog requirements and the amount of work actually taken as shown by transcripts, few fields showed a sharp increase in the amount of work taken in the major fields over the amount prescribed in the catalogs."<sup>41</sup> Nearly 800 respondents in various subject fields expressed themselves as generally in favor of "about one-third of the work in a major" (42 + semester hours).<sup>42</sup> Most of the special methods courses were included in the major by the survey when catalog prescriptions were being analyzed, and background requirements in respective fields were frequently included in the major when transcripts or the work actually taken was being analyzed.

It is interesting to note how many majors were offered by the 55 teachers colleges, what these majors were, and what the movements have been toward or away from the various fields of specialization. Table XXI shows the number of majors and minors offered.

Each of the 55 teachers colleges has offered one or more majors though some were of a general nature. One college offered a general major in secondary education with possibilities of adding a few courses in a chosen academic field. This college continued the

<sup>39</sup> *National Survey of the Education of Teachers*, Vol. III, pp. 70 and 517, 1933.

<sup>40</sup> *Ibid.*, pp. 70 and 525.

<sup>41</sup> *Ibid.*, pp. 69-70.

<sup>42</sup> *Ibid.*, p. 70.

*Specialization Requirements*

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TABLE XXI

Number of Majors and Minors Offered, 1928 and 1938

<i>Number of Majors and Minors</i>	<i>Number of Colleges Offering Majors</i>	<i>Number of Colleges Offering Minors</i>		
	<i>1928</i>	<i>1938</i>	<i>1928</i>	<i>1938</i>
0.....			13	8
1.....	1	2		
2.....	2			
3.....				
4.....	2			
5.....				
6.....	2	1		1
7.....	4			
8.....	2	2	3	
9.....	3	4	3	1
10.....	2		1	2
11.....	5	2	3	1
12.....	1	3	4	2
13.....	4	4	4	3
14.....	8	1	4	3
15.....	2	6	3	1
16.....	1	7	3	7
17.....	2	4	1	3
18.....	2	6	3	5
19.....	1	3	2	2
20.....	6	2	3	4
21.....	2	3	3	4
22.....		2		4
23.....	2	1	2	2
24.....	1			1
25.....		1		
26.....		1		
27.....				
28.....				
29.....				
30.....				
31.....				1
	55	55	55	55
Average.....	13.0	15.3	14.8	17.2

*Note.* The above table reads: no colleges offered zero majors in 1928 and 1938, 13 colleges offered zero minors in 1928 and 8 colleges offered zero minors in 1938. One college offered one major in 1928 and 2 colleges offered one major in 1938.

same practice in 1938 and to it was added a college which in 1928 offered four majors for secondary school teachers. A third college offered two majors for high school teachers in 1928, one in the general field and a second in music. This college is now offering nine majors.

There has been a general tendency to increase the number of majors offered for the preparation of secondary school teachers during the past ten years. In 1928, 18 colleges of the 55 colleges studied offered from one to 10 majors and by 1938 there were only nine which offered as few as 10. Eight colleges have made no changes, 35 have increased their offerings in majors, and 12 have made decreases. The total number of majors offered in 1928 was 720, or an average of 13 per college and in 1938, 840, or an average of 15.3 per college. Some of the larger teachers colleges offered as many as 24 majors in 1928 and 26 in 1938. Though this seems to represent an attempt to meet all of the needs of the area served and also the individual interests of the students, it may be a disintegrating influence.

Breadth in specialization is sometimes provided by requiring combinations of majors or minors or even by permitting a variety of majors or minors. There were two colleges in 1928 which required specialization in three major fields. One of these colleges required only one major in 1938 and the other required two. However, there were seven colleges which required two majors in 1928 and eight which made the same requirement in 1938. One college (Fairmont, W. Va.) offered and outlined 13 combinations of majors and minors in related fields, in accordance with demands from the schools served. This practice was continued over the ten-year period. A second college classified related subjects into five groups and required "one major in one subject, a double minor in another subject and a minor in each group which does not include one or both of these subjects."<sup>43</sup> This practice in 1928 was continued in 1938 with special provisions for broadening the majors by adding courses from related majors, as, for instance: "A student earning a major in history may add to the maximum number of quarter hours allowed (48 quarter hours) courses in political

<sup>43</sup> Catalog, State Teachers College Macomb, Ill., p. 48, 1928.

science and economics to a combined maximum of 72 quarter hours in three subjects."<sup>44</sup> Nine colleges made special provisions for breadth in specialization in 1938 and none in 1928. These colleges followed such systems as: requiring two or more fields of specialization from subject groups (Milledgeville, Ga., Terre Haute, Ind., Greenville, N. C.), permitting three minors (De Kalb, Ill.), permitting four minors in place of a major and two minors (Greeley, Colo.), requiring two majors generally in related fields (Trenton, N. J., Edmund, Okla., Huntsville, Texas), and requiring 15 semester hours in each of the major academic fields (Greeley, Colorado). In addition to the 11 colleges referred to here there were 12 colleges which required two minors in 1938.

It has been noted that the 55 colleges studied required an average of 42.1 semester hours in professional-cultural background in 1938, or approximately one-third of the total four-year requirement. These colleges have in the majority of cases adopted the practice of requiring one major and two minors.

The following statements summarize the requirements in respect to the number of majors and minors. In 1928, 46 of the teachers colleges required one major; seven colleges, two; and two colleges, three. In 1938, 47 colleges required one major and eight required two. In 1928, 13 of the colleges required no minors; 24, one; 12, two; and three, three. In 1938, eight required no minors, 22 required one, 24 required two, and one required three.

In 1928, 42 teachers colleges offered a total of 655 minors; in 1938, 47 offered 811. The average number of minors offered in 1928 and 1938 were 14.8 and 17.2 respectively. Of the 13 colleges which did not require or offer a minor in 1928, six required two or three majors; two, a general course; and five changed their program of studies and are now offering from 11 to 21 different minors and requiring one or two minors for graduation. Eight colleges which did not require or offer a minor or minors in 1938 required double majors or general courses much the same as in 1928.

In general the data relative to major and minor offerings and requirements show that there has been a 16.7 per cent increase in the total number of majors offered and that the average number of

<sup>44</sup> *Ibid.*, p. 50.

majors offered per college has increased 17.7 per cent. Several colleges have divided broad fields of specialization into separate narrow majors. The range of the number of majors offered by the 55 colleges shows a lack of definite policy as to how specialization should serve the high schools. This range has broadened during the past ten years. The number of minors offered has increased 25.8 per cent and the average number of minors offered per college has increased 16.2 per cent. Minors in narrow fields may seem somewhat less objectionable than majors in the same fields.

In order to overcome the disintegrating effect of narrow majors and minors, combinations have been required and as the number of minors has increased there has been an increasing tendency to require students to specialize in related fields. The most common requirements in specialization have been one major and one minor in 1928 and one major and two minors in 1938.

#### MAJORS OFFERED

The National Education Association passed resolutions in 1908 declaring that "The normal schools prepare teachers for the entire public service" and that "the curriculum of the normal schools (four-year course) should be broad enough in scope to touch all phases of special preparation demanded by the broadening curricula of the public schools."<sup>45</sup> This resolution implies that at that time a broad general four-year curriculum should meet the needs of high school teachers. However, as high school enrollment and specialization increased, the normal schools or teachers colleges established majors and minors in conformity with the liberal arts college practice. Among the first exceptions to this practice was the offering of majors in the special teaching fields, such as industrial arts, household arts, and physical education, which had not been provided for by many of the arts colleges.

Hall-Quest reported in 1925 that the largest number of secondary curricula in teachers colleges were devoted to "Home Economics (38), Four-Year High School (36), Music (26), Commercial (25), Practical Arts (19), Art (19), Physical Education

<sup>45</sup> *Proceedings of the National Education Association*, p. 735, 1908.

(18), Agriculture (17), Physical Science (15), Biological Science (12), Mathematics (12), English (11), Two Year Junior High School (11), and History (10)."<sup>46</sup> To this were added Foreign Languages (11), Latin (9).<sup>47</sup>

Teachers college curricula in California are still limited to the preparation of special subject teachers and junior high school teachers, and two teachers colleges in the New England states (Bridgewater, Mass., and Providence, R. I.) are still largely limited to the general major for the preparation of secondary school teachers. All of the other teachers colleges offer academic majors in separate secondary school teaching fields.

Table XXII shows the number of times teachers colleges offered various majors in 1928 and 1938. The 48 majors named do not form a complete list of titles in that biology and biological science were listed as biological science, various titles for music majors were listed as music, and the same procedure was followed for all departments. The total list is arranged in rank order for 1938. English, mathematics, and biological science occupied first, second, and third places respectively for 1928 and 1938. The special subjects, such as music, physical education, home economics, industrial art, and art, ranked from fourth to thirteenth place in both years. History ranked sixth in 1928 and eleventh in 1938. There were 10 majors offered in the field of social studies and the total number of times majors were offered in this field increased from 86 to 117, or 36 per cent. Social science was offered as a major by 20 colleges in 1928 and by 25 in 1938. The increase in economics was from six to 11 colleges, or 83.3 per cent.

There was a decrease in Latin and Spanish offerings while French and German increased slightly. More colleges offered majors in science and the general or broad majors were favored. Biological science, physical science, and natural science majors increased from 74 to 90, or 21.6 per cent. The greatest change was made in the general science major which was increased 52.9 per cent. The decrease in the number of majors offered in education

<sup>46</sup> A. L. Hall-Quest, *Professional Secondary Education in Teachers Colleges*, p. 41, 1925.

<sup>47</sup> *Ibid.*, p. 41.

TABLE XXII

List of Majors and Times Offered by 55 Teachers Colleges  
in 1928 and 1938

<i>Major</i>	<i>Times Offered</i>		<i>Major</i>	<i>Times Offered</i>	
	<i>1928</i>	<i>1938</i>		<i>1928</i>	<i>1938</i>
1. English.....	51	53	29. Zoology.....	5	5
2. Mathematics.....	48	53	30. Botany.....	5	5
3. Biological Science.....	42	46	31. Library Science.....	1	5
4. Music.....	30	46	32. Philosophy and Psychology.....	1	3
5. Physical Education....	29	44	33. History and Government.....	2	2
6. French.....	41	42	34. Health.....	1	2
7. Home Economics.....	38	41	35. Language and Literature.....	3	1
8. Business or Commerce.	28	40	36. Psychology.....	3	1
9. Industrial Arts.....	33	39	37. Supervision and Administration.....	4	1
10. Art.....	25	38	38. Physiology.....	2	1
11. History.....	34	37	39. Junior High School...	5	1
12. Latin.....	36	37	40. Geography and Geology.....	2	1
13. Chemistry.....	30	36	41. Philosophy.....	1	1
14. Geography.....	31	30	42. History and Political Science.....	0	1
15. Physics.....	26	28	43. History and Social Science.....	1	1
16. General Science.....	17	26	44. Modern Language....	2	1
17. Social Science.....	20	25	45. Dramatics.....	0	1
18. Speech.....	5	19	46. Journalism.....	0	1
19. Spanish.....	24	18	47. Religious Education..	1	0
20. Physical Science.....	14	18	48. Economics and Accounting.....	1	0
21. Social Studies.....	8	18	Total.....	716	840
22. Agriculture.....	21	15			
23. German.....	10	15			
24. Economics.....	6	11			
25. Education.....	14	10			
26. Political Science.....	7	10			
27. Sociology.....	4	6			
28. Sociology and Economics.....	4	6			

and junior high school education might be expected in colleges which are primarily professional schools.

In general the number of majors offered has increased principally in the fields where high school subject enrollments have increased as, for instance, in social studies, business, science, and speech. This does not hold true, however, in the cases of French, German, and mathematics majors. It should be recognized that the increase in the total number of majors offered (716 to 840)

may not be due entirely to the merit of specialization. The evolution of curricula in comparatively new institutions is a part of the consideration.

The following data from Jackson's study relative to certificate requirements are quoted in order to note that there is a state- and nation-wide interest in greater specialization and greater breadth of subject matter preparation:

Minimum State Certificate Requirements in Respect to  
Majors and Minors \*

Course	Seventy-Eight Certificates	Forty-Five States
	Frequency	Frequency
Major.....	53	36
Minor.....	32	22
Second Minor.....	10	6
Specified Cultural Subjects.....	17	10
Indefinite.....	2	
No specification.....	25	11

\* Claude E. Jackson, "State Rules and Regulations Covering Certification of High School Teachers," p. 10.

By comparing these data with data from Lowery's study of high school certification,<sup>48</sup> it may be noted that in 1923 only one state (Utah) referred to a requirement in a "major" field. New Mexico required special courses in state history and civics; Oklahoma required state history, agriculture, and school law; Texas required one course in English and not more than two courses in such fields as mathematics, history, languages, and science; Pennsylvania required 12 semester hours in the teaching field; Maryland required two years of continuous study of the two high school branches in which the certificates were issued; and Missouri required three semester hours in social science and five in English composition. The above requirements applied only to certain preferred types of secondary certificates.

In 1923 high school teachers were certified principally on col-

<sup>48</sup> M. L. Lowery, *Certification of High School Teachers*, Tables 1 to 48, 1924.

lege graduation, experience, and examinations. Only slight reference was made in a specific way to what might be called a provision for breadth or depth of specialization. Various low grade certificates were provided. Fifteen states granted certificates on the basis of a partial college course, 27 on a two-year normal school course, nine on a partial normal school course, two on graduation from high school, two on graduation from a teacher-training department of a high school, and 16 on graduation only.<sup>49</sup>

Bachman, in referring to such a "medley" of standards, stated in 1930 that "These variations in standards for the certification of high school teachers arise from the necessity of adjusting teacher-training requirements to practical conditions. Nevertheless, they are material obstacles in the way of developing an adequate system of high school teacher-training."<sup>50</sup> He claimed that "States in increasing numbers are now in a position to insist on a single academic standard-graduation from an accredited standard college." However, he assumed that such graduation "sheds little light on what the needed preparation of a high school teacher should be."<sup>51</sup>

For example, is it possible that one is prepared to teach in high school who has only six semester hours of college English? That it makes no difference whether prospective teachers take science or not, or if they do elect science, that any one of a half dozen is of equal value to them? Is any teacher prepared for high school teaching who has had no college history of any kind, to say nothing of American history? Does it make no difference in the preparation of high school teachers in what college studies they specialize, when college major after college major is rarely taught in high school, and sometimes never? Does it make no difference what courses, after one or two introductory courses, a prospective teacher takes in a given major? Or may it be that the present system of college majors and minors has no relation at all to the preparation of high school teachers?<sup>52</sup>

Data for 1930 show that 29 states had no academic requirements other than college graduation, 16 required majors and/or

<sup>49</sup> *Ibid.*, Table 50, pp. 12-13.

<sup>50</sup> F. P. Bachman, *Training and Certification of High School Teachers*, p. 10, 1930.

<sup>51</sup> *Ibid.*, p. 11.

<sup>52</sup> *Ibid.*, p. 13.

minors with only semester hours specified, and five required majors and/or minors with specified hours and also suggested courses.<sup>53</sup> Kandel has suggested that the diversity of standards is due in part to the fact that standards are being set up by a great variety of public and private agencies "with varying standards of education and of certification of teachers."<sup>54</sup> He has contended that "Teaching has not yet become either a profession or a life career."<sup>55</sup>

It is obvious that the chief obstacles to the development of a sound profession of teaching are to be found in the state laws and regulations for teachers' certificates and the attempt of small high schools to offer courses for which they do not have an adequate supply of teachers.<sup>56</sup>

The National Survey proposed the following in 1935:

For secondary teachers two or preferably three fields of specialization should be required, particularly since most beginning teachers will obtain their first experience in small high schools where they will be required to teach several fields of knowledge.<sup>57</sup>

The certificate data previously quoted for 1938 show that 36 states required a major, 22 a minor, six a second minor, and 10 specified cultural subjects. Jackson's study also revealed the following certification requirements:

For certification to teach in the high schools, thirty-seven states require an academic preparation represented by the bachelor's degree; two of these require the equivalent of the master's and one, twenty semester hours of graduate work. One of the two states which requires only two years of preparation requires, in addition, examinations in the subjects to be certified and a thesis. One state issues, upon the completion of one year of college work, a certificate which is valid for two years and is not renewable. One state will issue a certificate by examination: this certificate can be extended only by attendance in approved colleges. From the following table it may be noted that approximately seventy-seven per cent of the states set graduation from a four-year curriculum

<sup>53</sup> *Ibid.*, p. 17.

<sup>54</sup> I. L. Kandel, *Comparative Education*, p. 854, 1933.

<sup>55</sup> *Ibid.*, p. 854.

<sup>56</sup> *Ibid.*, p. 858.

<sup>57</sup> *National Survey of the Education of Teachers*, Vol. III, p. 85, 1933.

as the minimum preparation requisite to the issuance of eighty-six per cent of their certificates.

Minimum Training or Preparation Required to Fulfill the Requirements of the Forty-Seven States on the Seventy-Eight Certificates

<i>Extent of Preparation</i>	<i>Number of States</i>	<i>Number of Certificates</i>
Not stated.....		1
Examinations.....	1	1
One year of college.....	1	1
Two years of college.....	4 (8%)	5 (6%)
Three years of college .....	4 (8%)	3 (4%)
Bachelor's degree.....	34 (72%)	56 (72%)
Bachelor's degree plus.....	1	3 (4%)
Master's degree.....	2 (4%)	8 (10%)

Arizona, California, and Washington require five years of preparation; Florida, Georgia, Illinois, Nebraska, Oklahoma, and Texas issue these certificates on less than four years' preparation. Idaho, Nevada, New Hampshire issue two junior high school certificates upon three years' preparation. Arkansas grants the junior high school certificate upon two years' college work.<sup>58</sup>

The above data covering the period from 1923 to 1938 show marked developments in scholastic standards and a definite trend toward the recognition of professional subject matter objectives in the preparation of high school teachers.

A catalog study of *English in State Teachers Colleges* by Jewett stated that "The one finding that stands out most sharply from this study of requirements in English is that the colleges are not agreed upon the number of hours of English necessary for students preparing for any one of the various phases of teaching or upon the particular English studies most valuable for each group."<sup>59</sup> Jewett added that "the number of hours [semester hours] required varies from sixteen to seventy-five; the courses are sometimes prescribed, but rarely; they are sometimes chosen by students, and sometimes arranged in conference with the major professor."<sup>60</sup>

<sup>58</sup> Jackson, *op. cit.*, p. 8.

<sup>59</sup> Ida A. Jewett, *English in State Teachers Colleges*, pp. 38-39, 1927.

<sup>60</sup> *Ibid.*, p. 41.

These statements by Jewett made in 1927 may be looked upon as a serious indictment. However, they could not be applied to all of the colleges included in this study in 1928 and, furthermore, the situation has changed considerably during the past ten years. Nevertheless, it may be said that the problem of deciding upon how much should be prescribed and what should be prescribed has not been solved. In other words, there is not general agreement in the teachers colleges as to what their responsibility is in regard to an adequate preparation of high school teachers for a specific field of service.

This point may be illustrated in some detail from the present study by referring to teachers college practices in connection with the preparation of high school teachers of English. In 1928, 21 of the 55 teachers colleges made no course prescriptions for an English major in addition to the background requirements. Four of the 21 made no course prescriptions for background work in English. In 1938 there were seven colleges which made no course prescriptions for the English major. However, the seven colleges did prescribe background courses in the field. There were nine colleges which prescribed from two to nine semester hours for those specializing in English in both 1928 and 1938. Of the 21 colleges which made no course prescription for specialization purposes in 1928, six prescribed from 20 to 30 semester hours in 1938 and when the background courses were added, the number ranged from 24 to 36 semester hours. While some colleges made few or no prescriptions, there were others which made heavy prescriptions both in 1928 and 1938. These ranged from 24 to 44 semester hours including background.

It is apparent that there is little agreement relative to prescriptions for an English major and what has been said about the variations in the requirements for an English major is equally true of the other major fields of specialization which are included in this study. It is also apparent from the above data that there has been a tendency to increase prescriptions or to select and require courses which are fundamental to success in departmental high school work.

The remaining part of this chapter deals with changes and pos-

sible trends in the minimum number of semester hours prescribed for majors in a few selected fields; the relative amount of total course prescriptions in various majors for 1928 and 1938; and the nature of individual prescribed courses and groups of courses. The number of majors subject to analysis might amount to several hundred or to the 48 previously listed. However, this study is limited to the following majors: English, French, mathematics, and biology. General sciences and social sciences receive general treatment.

Data from catalogs and questionnaires relative to course requirements in these majors were occasionally incomplete, vague, or contradictory. This may be due to a somewhat definite intention on the part of certain colleges to avoid hard-and-fast rules and regulations. However, since the colleges have established the practice of requiring restricted and free electives, this attitude may seem unnecessary. There are other causes which may have led to what might be termed loose curriculum practices for professional colleges, such as student and staff initiative, departmentalism and individualism, liberal arts college traditions, and lack of definite vocational objectives.

In order to provide reliable data relative to course requirements for teachers college majors in both 1928 and 1938, it has been necessary to select from among the 55 colleges under consideration, groups of colleges which have provided complete and accurate data.

#### ENGLISH AS A MAJOR

Deyoe's study of "trends in curriculum offerings for the preparation of high school teachers of academic subjects as indicated by 45 state teachers colleges and normal schools" shows that 20 per cent of the institutions studied made provision for specialization in English in 1902-03, 31 per cent in 1912-13, 44 per cent in 1922-23, and 62 per cent in 1932-33.<sup>61</sup> Each of the 55 teachers colleges offered opportunities for specialization in English in 1928 and 1938. However, eight of the teachers colleges did not specify

<sup>61</sup> G. P. Deyoe, *Curriculum Practices and Policies*, p. 36, 1935.

the semester-hour requirement for specialization in English in 1928 and three of the colleges are listed as "not specified" in 1938.

The range of the minimum semester hours required for a major in English in 1928 was from 16 to 45½ and in 1938 from 20 to 40. More than one-half of the colleges specified a minimum of 24 hours in 1928. However, their average requirement was 26.1 semester hours. In 1938 approximately one-third required 24 semester hours and only one required less than 24. There were 22 colleges which specified 30 or more semester hours as compared with nine in 1928. The average of the minimum requirements for an English major was 28.7, which represents a 10.0 per cent increase over 1928. During the same period the background requirements in English had increased 10.8 per cent.

In making a detailed study of English as a major, it was necessary to select colleges which furnished complete and reliable data for 1928 and 1938. It was possible to select 34 such colleges. In Table XXIII an effort has been made to group prescribed courses according to their content or purposes. There is naturally considerable overlapping, that is, composition cannot be separated entirely from grammar. Yet courses which were predominately composition courses have been listed together and the same practice has been followed with grammar, language survey, English literature, American literature, prose, drama, poetry, and speech. The courses lend themselves somewhat to this grouping; however, the grouping itself should not suggest that such divisions should be made or promoted. In fact, it may seem that there has been too great a tendency toward differentiating subject matter in accordance with mere form or types.

It may be noted from Table XXIII, column 3, that introductory college courses in composition were frequently required for background purposes. Advanced courses were also required in 1928 for the same purpose but discontinued in 1938. The emphasis upon the advanced courses shifted to specialization in 1938 and constituted 40% of the total of 53½ semester hours required in this field. The new courses added under major prescriptions in 1938 were news writing and editing, journalism, and creative poetry and prose

TABLE XXIII

Course and Semester-Hour Prescriptions for a Major in English in 34  
Teachers Colleges, 1928 and 1938

Course	I		2		3		4		5	
	Total Times Required		Cultural Background Prescriptions		Major Prescriptions		Total Prescriptions			
	1928	1938	1928	1938	1928	1938	1928	1938	1928	1938
Advanced Composition...	II	14	14½	○	9½	36½	24	36½		
Advanced Rhetoric.....	I	I	2½	○	○	2½	2½	2½		
Advanced Writing.....	○	I	○	○	○	2	○	2		
Rhetoric and Composition	5	5	21½	23½	8	○	29½	23½		
English Composition.....	19	19	73½	94½	8½	2½	82½	97½		
News Writing and Editing	○	I	○	○	○	3	○	3		
Journalism.....	I	2	1½	○	○	2½	1½	2½		
Creative Poetry and Prose										
Writing.....	○	I	○	○	○	2½	○	2½		
Composition and Grammar	○	3	○	3	○	2	○	5		
Freshman English.....	9	7	39	41½	○	○	39	41½		
Freshman Composition...	I	2	4	12	○	○	4	12		
Sophomore Composition..	I	○	○	○	4	○	4	○		
Junior College Composi-										
tion.....	○	I	○	6	○	○	○	6		
Narration.....	○	I	○	3	○	○	○	3		
Speaking and Writing										
English.....	2	○	4	○	○	○	4	○		
Total, Composition..	50	58	160½	183½	30	53½	190½	237½		
Functional English										
Grammar.....	○	I	○	○	○	3	○	3		
Modern English Grammar.	I	I	○	○	2	2½	2	2½		
English Grammar.....	I	5	2½	6	○	6	2½	12		
Advanced Grammar.....	2	2	○	○	4	4	4	4		
Grammar for Teachers...	○	2	○	○	○	3½	○	3½		
College Grammar.....	I	○	○	○	2	○	2	○		
Total, Grammar.....	5	11	2½	6	8	18½	10½	24½		
Development of Modern										
English.....	○	I	○	○	○	2	○	2		
English Language.....	I	2	○	○	2½	4½	2½	4½		
History of English Lan-										
guage and Literature...	○	I	○	○	○	5½	○	5½		
History of English Lan-										
guage and Grammar....	I	○	○	○	2½	○	2½	○		
History of English Lan-										
guage.....	○	4	○	○	○	9½	○	9½		

## Specialization Requirements

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TABLE XXIII—Continued

Course	I		2		3		4		5	
	Total Times Required		Cultural Background Prescriptions		Major Prescriptions		Total Prescriptions			
	1928	1938	1928	1938	1928	1938	1928	1938	1928	1938
History and Development of English Language....	1	3	2½	2	0	5½	2½	7½		
English Philology.....	0	2	0	0	0	6	0	6		
Total, English Lan- guage.....	3	13	2½	2	5½	32½	8	34½		
Literature and Composi- tion.....	1	0	4	0	0	0	4	0		
Contemporary Literature.	3	3	2½	0	5½	7½	8	7½		
Introduction to Literature	6	9	12	31	4	0	16	31		
Library Instruction and Reading.....	1	1	1½	2	0	0	1½	2		
High School Literature....	2	3	0	0	4½	10	4½	10		
Fundamentals of Litera- ture.....	1	1	0	0	3	2	3	2		
Survey of American and English Literature.....	3	3	8	8	0	6	8	14		
Materials of High School English.....	1	1	2½	0	0	1½	2½	1½		
Classical Literature in Translation.....	1	1	0	0	2½	1½	2½	1½		
Medieval Literature.....	1	1	0	0	2½	1	2½	1		
World Literature.....	2	6	0	3½	5	9	5	40½		
General Literature.....	0	1	0	6	0	0	0	6		
Literature for Junior High Schools.....	0	1	0	6	0	0	0	6		
Total, General or Sur- vey Courses.....	22	31	30½	84½	27½	38½	58	123		
English Literature.....	10	12	10½	13	33½	45½	44½	58½		
English Novel.....	1	1	0	0	6	2½	6	2½		
Nineteenth Century Prose	2	2	0	0	8	5½	8	5½		
Forms of English Litera- ture.....	0	1	0	0	0	4	0	4		
Old English.....	1	0	0	0	2½	0	2½	0		
Middle English and Chaucer.....	0	1	0	0	0	2	0	2		
Chaucer.....	0	1	0	0	0	4	0	4		
Nineteenth Century Liter- ature.....	0	2	0	0	0	10½	0	10½		
Tennyson and Browning..	0	1	0	0	0	2½	0	2½		
Tennyson.....	1	0	0	0	2½	0	2½	0		

TABLE XXIII—Continued

Course	I		2		3		4		5	
	Total Times Required		Cultural Background Prescriptions		Major Prescriptions		Total Prescriptions			
	1928	1938	1928	1938	1928	1938	1928	1938	1928	1938
English Novel of Nine- teenth Century.....	1	0	0	0	2½	0	2½	0		
Survey of English Litera- ture.....	7	12	6	16	30⅔	49⅔	36⅔	65⅔		
English Literature to 1800.	0	1	0	0	0	5⅓	0	5⅓		
Historical English.....	0	2	0	0	0	5	0	5		
History of English Litera- ture.....	1	0	0	0	8	0	8	0		
Modern English Literature	1	0	0	0	3	0	3	0		
Eighteenth Century Eng- lish.....	1	0	0	0	3	0	3	0		
Romantic Movement.....	1	1	0	0	2½	4	2½	4		
Victorian Literature.....	2	0	6	0	2½	0	8⅔	0		
Neoclassic Literature.....	1	1	0	0	2½	4	2½	4		
Dr. Johnson and His Circle	1	0	0	0	2½	0	2½	0		
Total, English Litera- ture.....	31	38	22½	29	111	144⅔	133⅔	173⅔		
American Literature.....	11	9	6	3	30⅔	34⅔	36⅔	37⅔		
Literature of the South- west and Northwest....	0	1	0	0	0	2	0	2		
Readings in American Lit- erature.....	1	0	0	0	3	0	3	0		
American Prose.....	0	1	0	0	0	2½	0	2½		
Survey of American Litera- ture.....	1	4	0	0	5⅓	11⅔	5⅓	11⅔		
Total, American Lit- erature.....	13	15	6	3	38⅔	50⅔	44⅔	53⅔		
Modern Novel.....	1	0	0	0	3	0	3	0		
The Novel.....	0	1	0	0	0	2	0	2		
The Short Story.....	1	0	0	0	2	0	2	0		
Essays.....	0	1	0	0	0	2½	0	2½		
Modern Prose.....	1	0	0	0	5⅓	0	5⅓	0		
Total, Prose.....	3	2	0	0	10⅓	4⅔	10⅓	4⅔		
Drama.....	1	0	3	0	0	0	3	0		
History of Drama.....	1	0	0	0	2½	0	2½	0		
Shakespeare.....	9	15	0	0	25⅓	46½	25⅓	46½		
Greek Drama.....	1	0	0	0	2½	0	2½	0		

*Specialization Requirements*

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TABLE XXIII—Continued

Course	1		2		3		4		5	
	Total Times Required		Cultural Background Prescriptions		Major Prescriptions		Total Prescriptions			
	1928	1938	1928	1938	1928	1938	1928	1938	1928	1938
Modern Drama.....	2	1	0	0	5½	2⅔	5½	2⅔		
Play Directing.....	0	2	0	0	0	5½	0	5½		
Play Production.....	1	1	0	0	3	2	3	2		
Elizabethan Drama.....	1	0	0	0	2⅔	0	2⅔	0		
Dramatic Art.....	0	1	0	0	0	2⅔	0	2⅔		
Total, Drama.....	16	20	3	0	41½	59½	44½	59½		
Introduction to Study of Poetry.....	1	0	0	0	2⅔	0	2⅔	0		
Modern Poetry.....	1	0	0	0	2⅔	0	2⅔	0		
English Poetry.....	0	1	0	0	0	8	0	8		
Modern English Poetry....	2	2	0	0	5	6½	5	6½		
American Poetry.....	1	1	0	0	2⅔	2⅔	2⅔	2⅔		
English Poetry of Nineteenth Century.....	1	0	0	0	3	0	3	0		
Romantic and Victorian Poets.....	0	1	0	0	0	3	0	3		
Chief American Poets....	1	0	0	0	3	0	3	0		
Reading of Poetry.....	1	0	1½	0	0	0	1½	0		
Total, Poetry.....	8	5	1½	0	19	20½	20½	20½		
Oral Composition and Speech.....	0	1	0	2	0	0	0	2		
Speech and Grammar....	1	0	2½	0	0	0	2½	0		
Phonetics and Organs of Speech.....	0	1	0	0	0	1½	0	1½		
Reading and Speaking....	0	1	0	0	0	2½	0	2½		
Interpretative Reading ...	2	2	0	0	4½	5½	4½	5½		
Fundamentals of Speech..	2	10	4½	18½	0	6	4½	24½		
Elementary Speech.....	0	1	0	0	0	3	0	3		
Oral English.....	3	1	7	2	0	0	7	2		
Oral Expression.....	2	0	0	0	4½	0	4½	0		
Public Speaking.....	6	2	15	2½	5½	2	20½	4½		
Argumentation.....	0	1	0	0	0	1½	0	1½		
Public Speaking and Debating.....	1	0	0	0	4	0	4	0		
Voice Science.....	0	3	0	5	0	2½	0	7½		
Oral English in High School.....	1	1	0	0	2	2½	2	2½		
Total, Speech.....	18	24	29½	30	20½	27	50	57		

TABLE XXIII—Continued

Course	1		2		3		4		5	
	Total Times Required		Cultural Background Prescriptions		Major Prescriptions		Total Prescriptions			
	1928	1938	1928	1938	1928	1938	1928	1938	1928	1938
Principles of Literary Criticism.....	o	1	o	o	o	1½	o	1½		
Research in English.....	o	1	o	o	o	1	o	1		
Total, Unclassified...	o	2	o	o	o	2½	o	2½		
Grand Total.....	169	219	259	338	312	453½	571	791½		

writing. The prescriptions in the general field of composition increased from 30 to 53½ semester hours, or 78.1 per cent. The total prescriptions in the background and specialization divisions increased from 190½ to 237½, or 24.9 per cent. The average total college requirements in composition increased from 5.6 semester hours in 1928 to 6.9 in 1938.

The total prescriptions in separate courses in grammar were few but of greater number for specialization purposes than for background purposes. The course requirements for specialization purposes increased from 8 to 18½ semester hours. This increase may have been in response to demands from high schools. However, when an average of nearly seven semester hours is allotted to composition, it may seem unwarranted. The interest in the history and development of English has rapidly increased. Specialization requirements in this field have increased 519.5 per cent. If this interest continues to increase, it may lead to a pointed discussion as to whether general language belongs in the English or language department of the college and the high school.

The group of general or survey courses in English is made up principally of courses in literature which are of such a broad or general nature as to be unsuited to the other more narrow classifications. The general characteristics of this group make the courses listed in it worthy of consideration. Some of the titles suggest the

advisability of combining related materials and activities, such as American and English literature, literature and composition, and literary instruction and reading. Other courses, such as introduction to literature, contemporary literature, and world literature, provide an overview or orientation from which differentiated or intensive courses may be extended.

The literature courses most frequently required for specialization purposes in 1928 and 1938 were contemporary literature, high school literature, and world literature. Approximately two-thirds of the total requirements in general courses in 1928 were in these three courses. The total prescriptions in general courses were increased from 58 semester hours in 1928 to 123 in 1938, or 112.1 per cent. The major part of these totals and of the increase may be accounted for by background requirements, as noted in column 3 of Table XXIII.

In addition to the general courses required in literature, 42 other courses in literature were listed and prescribed for 1928 or 1938. These have been classified under English literature, American literature, prose, drama, and poetry.

It will be noted that background prescriptions were comparatively large in composition and general literature and small in what may be called the narrower courses. In fact, with the exception of background prescriptions in English literature and in American literature, they are negligible. It should also be noted that the principal prescriptions for specialization purposes were in the same fields though far greater in numbers than for background purposes. The total prescriptions in English literature for specialization purposes increased approximately 30.0 per cent. Prescriptions in American literature increased 34.5 per cent. The comparatively narrow courses in prose, drama, and poetry were seldom prescribed for background purposes and received only minor emphasis for specialization purposes. The course in Shakespeare was assigned about one-half of the total number of semester hours prescribed in the three fields of prose, drama, and poetry. If this course had been classified under English literature, the total prescriptions in the three fields for specialization purposes would have totaled only 35 $\frac{2}{3}$  semester hours in 1928 and 38 $\frac{1}{3}$  in 1938. It

seems evident that no significant changes were made in these fields during the ten-year period.

It has been noted that the minimum semester-hour requirements for an English major have increased 10.0 per cent and the course prescriptions have been many and varied. The greatest number of course prescriptions have been made in English composition. It was followed by English literature, general or survey courses in literature, speech, drama, American literature, poetry, and prose. Increases have been noted in all fields except prose. The principal increases have been made in survey courses and English literature. There appears to be a general trend toward broad courses, such as freshman English, world literature, English literature, and American literature. Marked increases have been made in language courses which emphasize the history and development of language.

Table XXIV summarizes the prescription data within four groupings—composition, grammar, and language; literature; speech; and unclassified. There has been a 30.7 per cent increase

TABLE XXIV

Summary of Total Semester Hours Required in Major Fields of English by 34 State Teachers Colleges in 1928 and 1938

Major Field	Hours Prescribed		Hours Prescribed		Total Hours Prescribed		Average per College	
	Times Prescribed	Background	1928	1938	1928	1938	1928	1938
Composition, Grammar, and Language.....	58	82	166	191½	43½	105½	209½	297
Literature.....	90	109	63½	116½	248	319	311½	435½
Speech.....	18	24	29½	30	20½	26½	50	56½
Unclassified.....	0	2				2½	2½	.07
Total.....	166	217	259	338	312	453½	571	791½
							16.80	23.28

in the number of times courses have been prescribed. Prescriptions for the specific purpose of specialization amounted to 312 semester hours in 1928 and 453½ in 1938, or an increase of 45.3 per cent. Of the semester hours prescribed for specialization in 1928, 79.5

per cent were in the field of literature as compared with 70.3 per cent in 1938. Though there was a 28.6 per cent increase in the number of semester hours prescribed in literature in 1938 over 1928, the decrease in the relative amount of time devoted to literature has resulted from increased prescriptions in composition, grammar, and language.

The number of semester hours prescribed in English totaled 571 in 1928 and 791½ in 1938, or an increase of 37.3 per cent. The average number of semester hours prescribed per college was 16.8 in 1928 and 23.3 in 1938.

After adding the restricted and free electives which were required in addition to the course prescriptions, the requirements of the 34 colleges amounted to the following:

	1928	1938
Total semester hours in prescribed courses.....	571	791½
Total semester hours in restricted electives.....	93	79
Total semester hours in free electives.....	$237\frac{2}{3}$	$168\frac{1}{3}$
Grand Total.....	$901\frac{2}{3}$	$1038\frac{5}{6}$
Average college requirement for major.....	26.5	30.6

The increase in the total number of semester hours required amounted to 137½, or 15.6 per cent. It should be recognized that the average college requirements of 26.5 in 1928 and 30.6 in 1938 do not include possible free curriculum electives which often amount to a considerable number of semester hours.

It has been noted that the National Survey reported that the amount of work required for an English major based on an analysis of 66 teachers college catalogs was 30 semester hours, and the amount of work actually taken in English as shown by students' transcripts was 33 semester hours.<sup>62</sup> However, these figures include courses in special methods of teaching English. A comparison of the minimum semester hours required for a major in English (26.1 in 1928 and 28.7 in 1938) as reported previously, with the actual requirements of 34 teachers colleges as stated above (26.5 and 30.6) is of interest. The figures for 1928 vary only slightly. This may be due to the common practice of requiring 24 semester hours

<sup>62</sup> *National Survey of the Education of Teachers*, Vol. III, p. 70, 1933.

for a major in 1928, including background requirements. The 30.6 semester-hour requirement in 1938 is well in line with the minimum requirement of 28.7 in 1938 and the transcript record of 33 semester hours of the National Survey.

The study of the requirements for an English major shows several changes and possible trends.

1. Though skill subjects in English are more frequently prescribed for background purposes than for specialization purposes, they have recently received greater emphasis in the field of specialization.

2. Literature prescriptions have continued to make up over 70 per cent of the total specialization requirements and the prescriptions in literature have increased nearly 30 per cent during the past ten years.

3. General or survey courses are receiving greater emphasis and narrow or highly specialized courses are being discontinued.

4. Free and restricted electives are being replaced by prescribed courses.

5. Both the minimum and the actual requirements for an English major have been increased considerably during the past ten years.

Closely related to the majors in English are the majors in speech, librarianship, journalism, and dramatics.

Three of the 55 colleges offered majors in speech in 1928 and 19 in 1938. The average semester-hour requirements were 24.7 in 1928 and 25.6 in 1938. One college offered a major in librarianship in 1928. This major required 28 semester hours. In 1938 five colleges offered such a major for 24,  $26\frac{2}{3}$ , 36, and 33 semester hours. One college did not specify its semester-hour requirements. In 1938 one college offered a major in journalism requiring 28 semester hours and one college offered a major in dramatics of  $22\frac{1}{2}$  semester hours.

#### FRENCH AS A MAJOR

There has been a tendency to integrate subjects within such broad fields as science and social studies. Tharp has asked the

question, "Can Modern Languages Integrate?" In 1936 he made this statement:

Mr. Aikin, in summing up the discussion (National Education Association panel discussion, St. Louis, 1936), admitted the wide range of the question which remains open for discussion. Experimentation will go on. If a pupil resents foreign language study and feels he is getting little from it, perhaps integration will reach him for something he would otherwise miss. After five years of the eight-year experiment among the thirty progressive schools, teachers in those schools are beginning to feel that their own education was neglected when they fail to see a connection of their specialty with other areas. There is a lack of experience with wide areas of study and no complete solution will be found until teachers are trained for such purposes.<sup>63</sup>

The same year Pei concluded a discussion of orientation courses in language with the statement that "an orientation course stressing the growth, development, and nature of languages as man's most significant social invention is needed both at the lower-division high school and lower-level college."<sup>64</sup> It cannot be said that much has been accomplished toward this objective. However, general language study is gaining headway in the high schools and it seems that integration is being promoted in teachers colleges by combining the differentiated majors in language into a "Foreign Language Major"<sup>65</sup> as has been done at the Colorado State College of Education. Six teachers colleges in the meantime have set up a requirement of one major and one or two minors in languages for those who wished to specialize in a language field.

The common practice is to require one major in a single language. Table XXV shows the number of times majors were offered in four language fields and the minimum semester-hour requirements for a major in those fields. The majors are listed in their rank order as to number of times offered. The range in minimum semester hours required has decreased. The increases in the average semester-hour requirements may be due principally to the general discontinuance of low semester-hour requirements.

<sup>63</sup> J. B. Tharp, "Can Modern Languages Integrate?" *Modern Language Journal*, 20:419, April, 1936.

<sup>64</sup> M. S. Pei, "Languages at the Crossroad," *French Review*, 9:82-83, April, 1936.

<sup>65</sup> Catalog, Colorado State College of Education, Greeley, Colo., p. 78, 1938.

TABLE XXV

Language Majors Offered in 1928 and 1938, Showing the Times Offered, Range of Minimum Semester Hours Required, and Average Minimum Semester-Hour Requirement

<i>Major</i>	<i>Times Offered</i>		<i>Range in Semester Hours</i>		<i>Average Requirements</i>	
	<i>1928</i>	<i>1938</i>	<i>1928</i>	<i>1938</i>	<i>1928</i>	<i>1938</i>
French.....	33	41	16 to $45\frac{1}{3}$	18 to 32	24.5	26.1
Latin.....	34	37	16 to $45\frac{1}{3}$	20 to 32	24.4	25.6
Spanish.....	21	17	20 to $28\frac{2}{3}$	20 to 32	24.2	26.0
German.....	10	15	20 to 32	24 to 32	24.1	27.9

Though French is a well-established subject in college curricula, course prescriptions in this field are limited. French was offered as a major by 70.9 per cent of the 55 colleges in 1928. However, 26 colleges made no course prescriptions, thereby leaving the semester-hour requirements for a major to free elections. Course prescriptions were made by 12 colleges, or 31.6 per cent of those offering majors in French. In 1938, 41, or 74.5 per cent, of the 55 colleges offered French majors and 17 made no course prescriptions as compared with 21 out of 33 in 1928. Twenty-four, or 58.5 per cent, of the colleges which offered majors in 1938 made course prescriptions. The 100 per cent increase in the number of colleges which made course prescriptions is higher than like increases made in other majors.

Two of the 12 colleges which made course prescriptions for a French major in 1928 discontinued the major and one continued the major but discontinued the practice of making prescriptions. Hence, only nine colleges remained which prescribed courses for their French major in both 1928 and 1938. A systematic study of course requirements in French in nine colleges for purposes of noting changes and trends would have little significance. The fact that the number of comparable cases is so few does tend to signify a lack of policy in curriculum-making. If such a policy, whether it be for prescription or against it, has been defined for teachers colleges it might be expected that it would be apparent in its application to such a long-standing and well-defined major as French.

Majors in such new subject matter organizations as are comprehended under general science and social studies are in an experimental stage and not necessarily subject to general policy.

A review of the facts in the case of French shows that about one-third of the colleges which offered French as a major in 1928 carried prescriptions and that in 1938 more than one-half carried prescriptions. The practice in 1938 points toward a definite policy of prescription.

#### MATHEMATICS AS A MAJOR

Seven of the 55 teachers colleges studied did not offer a major in mathematics in 1928 and five of the colleges which made the offering did not specify the requirement for a major. In a few other cases it was not necessary to specify because the total courses offered would barely constitute a major for a high school teacher in mathematics. In 1938 there were two colleges which did not offer a major and one which did not specify the requirement. The distribution of the minimum semester-hour requirements of the 43 colleges which offered a major in 1928 was from 16 to  $32\frac{2}{3}$  semester hours and the average was 24.5. The range broadened in 1938 to 15 to 37 and the average increased to 25.8. A few colleges extended the mathematics major by requiring courses in physics, astronomy, mathematical drawing, or industrial arts in addition to pure mathematics.

Aside from the seven colleges which did not offer majors in mathematics in 1928 there were 21 which did not prescribe courses for the major and five which specified only cultural background courses. In 1938 there were seven colleges which specified no courses for the major in mathematics though they offered such a major. This marked increase in the number of colleges which specified course requirements signifies a trend toward prescription. The course sequences in mathematics, however, were well established and it may be supposed that students needed little or no guidance in selecting courses. There were 24 colleges which offered complete information relative to course requirements, electives, and background requirements in both 1928 and 1938 (Table

XXVI). These data are used to point out the nature of the course prescriptions in mathematics and the changes or possible trends within this major field.

Table XXVI shows that review courses in mathematics have been replaced for the most part by orientation or survey courses, such as introduction to mathematics, freshman mathematics, mathematical analysis, and applied mathematics.

The requirements in trigonometry, college algebra, analytic geometry, and calculus were approximately the same in 1938 as in 1928. Requirements in the history of mathematics have increased only slightly. Statistics was required three times in 1938, once for professional background purposes and twice for specialization purposes.

The 32 courses listed were all required in 1938 with the exception of arithmetic, review algebra, spherical trigonometry, and surveying. Twenty of the 32 courses were required in 1928. There were 106 course requirements in 1928 and 132 in 1938, or an increase of 24.5 per cent. The average number of courses required per college was 4.4 in 1928 and 5.5 in 1938. The background requirements in mathematics were comparatively few and decreased in number. The total number of semester hours prescribed was 381 in 1928 and 485 in 1938, or an increase of 27.4 per cent. The course prescriptions per college averaged 15.9 and 20.2 semester hours respectively.

Restricted electives were required by two colleges for seven semester hours in 1928 and by five colleges for  $2\frac{2}{3}$  semester hours in 1938. Though there was an increase in the number of semester hours required in restricted electives, there was a decrease in free electives from 203 to 109 semester hours.

The number of colleges requiring restricted and free electives in 1928 was 19 and in 1938, 12. The total requirements in electives were 210 semester hours in 1928 and  $135\frac{2}{3}$  in 1938, or averages of 11.1 and 11.3 respectively for the colleges which required electives and 8.8 and 5.6 for the 24 colleges studied.

The total number of semester hours required in course prescriptions and electives were 591 in 1928 and  $620\frac{2}{3}$  in 1938. The average requirements per college were 24.6 in 1928 and 25.8 in 1938.

TABLE XXVI

 Course Prescriptions for Specialization in Mathematics in 34  
 Teachers Colleges, 1928 and 1938

Course	Times Prescribed		Semester Hour Requirements Background		Semester Hour Requirements Specialization		Total Semester Hour Prescriptions	
	1928	1938	1928	1938	1928	1938	1928	1938
Algebra-Review.....	3	0	0	0	7 $\frac{1}{6}$	0	7 $\frac{1}{6}$	0
Arithmetic.....	3	0	6 $\frac{2}{3}$	0	5 $\frac{1}{3}$	0	12	0
General Mathematics....	0	1	0	0	0	8	0	8
Algebra for Teachers.....	0	1	0	0	0	2 $\frac{2}{3}$	0	2 $\frac{2}{3}$
Geometry for Teachers....	0	1	0	0	0	2 $\frac{2}{3}$	0	2 $\frac{2}{3}$
Introduction to Mathematics.....	0	2	0	5 $\frac{1}{3}$	0	0	0	5 $\frac{1}{3}$
Freshman Mathematics...	0	1	0	0	0	8	0	8
Social Uses of Mathematics	1	2	2 $\frac{2}{3}$	4 $\frac{2}{3}$	0	0	2 $\frac{2}{3}$	4 $\frac{2}{3}$
Field Work—Instruments.	0	1	0	0	0	2 $\frac{2}{3}$	0	2 $\frac{2}{3}$
Mathematical Analysis...	0	2	0	0	0	10 $\frac{2}{3}$	0	10 $\frac{2}{3}$
Applied Mathematics....	0	1	0	0	0	2 $\frac{2}{3}$	0	2 $\frac{2}{3}$
Mathematics of Finance and Commerce.....	1	2	0	0	2 $\frac{2}{3}$	5 $\frac{1}{3}$	2 $\frac{2}{3}$	5 $\frac{1}{3}$
Surveying.....	1	0	0	0	3	0	3	0
Total for Introductory and Functional Courses.....	9	14	9 $\frac{1}{3}$	10	18 $\frac{1}{6}$	42 $\frac{2}{3}$	27 $\frac{1}{2}$	52 $\frac{2}{3}$
Solid Geometry.....	7	6	0	0	20 $\frac{1}{6}$	15 $\frac{2}{3}$	20 $\frac{1}{6}$	15 $\frac{2}{3}$
Trigonometry.....	16	17	3	0	41 $\frac{5}{6}$	47 $\frac{1}{2}$	44 $\frac{5}{6}$	47 $\frac{1}{2}$
Spherical Trigonometry...	1	0	0	0	2	0	2	0
Analytic Geometry.....	16	20	0	0	74 $\frac{2}{3}$	73 $\frac{1}{2}$	74 $\frac{2}{3}$	73 $\frac{1}{2}$
Advanced College Algebra.	1	1	0	0	2 $\frac{2}{3}$	2	2 $\frac{2}{3}$	2
College Algebra.....	18	18	6	0	54 $\frac{5}{6}$	65 $\frac{5}{6}$	60 $\frac{5}{6}$	65 $\frac{5}{6}$
Theory of Equations.....	2	3	0	0	5	10	5	10
Differential Equations....	1	2	0	0	3	5 $\frac{2}{3}$	3	5 $\frac{2}{3}$
Calculus.....	10	12	0	0	68 $\frac{2}{3}$	89 $\frac{2}{3}$	68 $\frac{2}{3}$	89 $\frac{2}{3}$
Calculus I, II, III.....	1	1	0	0	5	7 $\frac{1}{2}$	5	7 $\frac{1}{2}$
Differential Calculus....	7	9	0	0	24	31	24	31
Integral Calculus.....	5	5	0	0	14	17 $\frac{1}{3}$	14	17 $\frac{1}{3}$
Advanced Calculus.....	2	5	0	0	5 $\frac{1}{3}$	14 $\frac{1}{3}$	5 $\frac{1}{3}$	14 $\frac{1}{3}$
College Geometry.....	5	7	0	0	13 $\frac{1}{3}$	20	13 $\frac{1}{3}$	20
Statistics .....	0	3	0	2	0	5 $\frac{2}{3}$	0	5 $\frac{2}{3}$
Theory of Functions.....	0	1	0	0	0	6	0	6
History of Mathematics..	5	6	0	0	10	13 $\frac{1}{3}$	10	13 $\frac{1}{3}$
Astronomy.....	0	1	0	0	0	2 $\frac{2}{3}$	0	2 $\frac{2}{3}$
Science and Psychology of Numbers.....	0	1	0	0	0	2 $\frac{2}{3}$	0	2 $\frac{2}{3}$
Total, Higher Mathematics.....	97	118	9	2	344 $\frac{1}{2}$	430 $\frac{1}{3}$	353 $\frac{1}{2}$	432 $\frac{2}{3}$
Grand Total.....	106	132	18 $\frac{1}{3}$	12	362 $\frac{2}{3}$	473	381	485

The increase amounts to 4.9 per cent. These semester-hour requirements for a major in mathematics do not include free curriculum electives, which might bring the average for 1938 considerably above the transcript analysis figure of 25 semester hours for 1931 as shown in the National Survey.<sup>66</sup>

In general it may be said that there are indications that a few courses are being reorganized and integrated for the purpose of making them more meaningful and more useful. These courses are listed in Table XXVI beginning with Introduction to Mathematics and ending with Surveying. Courses from this list were required three times in 1928 and 11 times in 1938. Aside from this change, there were tendencies to prescribe and teach more of the traditional subject matter. Majors have been more clearly defined insofar as course materials and course sequences are concerned. The discussion of background requirements quoted leading authorities relative to the values of general mathematics and "cultural" mathematics. There is little evidence of organized efforts to prepare teachers to teach such courses on the high school level.

#### BIOLOGICAL SCIENCE AS A MAJOR

Deyoe's study has shown that there has been a gradual increase in the number of curricula offered in all science fields in teachers colleges and that biological science has increased more rapidly than any other since 1912.<sup>67</sup> Van de Voort's catalog study shows that in 1924-1925, 90 normal schools and teachers colleges offered a variety of 166 courses in the general field of biology for a total of 763 times.<sup>68</sup> These data were not confined to courses for the preparation of high school teachers. However, the variety of courses offered indicates a groping for essentials as well as a marked interest in the subject matter of biology.

The growing demand for biology teachers in the high schools has been pointed out by Finley, who assembled data which show that

<sup>66</sup> *Op. cit.*, Vol. III, p. 70.

<sup>67</sup> *Op. cit.*, p. 67.

<sup>68</sup> A. M. Van de Voort, *The Teaching of Science in Normal Schools and Teachers Colleges*, pp. 36-39, 75, 1927.

26.5 per cent of the high schools of the United States offered biology in 1908 and 83.85 per cent in 1923.<sup>69</sup>

Biological science was offered as a major by 42 of the 55 teachers colleges in 1928 and 46 in 1938. A few of the colleges did not specify the minimum semester-hour requirements for a major, although they announced a major. Thirty-seven colleges specified the minimum requirements in 1928, and 42 in 1938. These requirements ranged from 16 to 52½ semester hours in 1928 and from 20 to 39½ in 1938. The average semester-hour requirement was 26 and 27.2 respectively. The most frequent requirements were 24 semester hours in both years. However, there were only two colleges which set up a lower minimum requirement in 1938 as compared with seven in 1928. Seven required 30 or more semester hours in 1928 as compared with 12 in 1938.

A lack of general agreement may be noted as to course prescriptions. Sixteen of the 37 colleges which offered majors in 1928 made no course prescriptions and four made prescriptions for background purposes only. In 1938 the number of colleges which made no course prescriptions for specialization was reduced to six and there were no colleges which prescribed background courses only.

There were 16 colleges which offered sufficiently complete information in 1928 and 1938 to warrant its use for purposes of supplementing the above information relative to minimum semester-hour requirements and to point out the nature of course prescriptions and the changes or possible trends indicated in prescriptions.

It has been shown that the minimum semester-hour requirements for a major in biology are definite; course prescriptions are quite indefinite; and elections are commonly left to the students or made under the direction of a staff member. Table XXVII tends to support the general lack of agreement relative to definite course requirements. Forty-eight titles are used by the 16 colleges to describe the fundamental knowledge which a prospective teacher of high school biology should possess. Thirty-four of these titles were

<sup>69</sup> C. W. Finley, *Biology in Secondary Schools and the Training of Biology Teachers*, p. 25, 1926.

TABLE XXVII

Course Prescriptions for Specialization in Biology in  
16 Teachers Colleges, 1928 and 1938

Course	Times Prescribed		Semester Hours Required		Semester Hours Required Specialization		Total Semester Hours Prescribed	
	1928	1938	1928	1938	1928	1938	1928	1938
Animal Biology.....	1	2	0	0	3	7½	3	7½
Plant Biology.....	1	3	0	0	4	6½	4	6½
Systematic Botany.....	1	0	0	0	2½	0	2½	0
General Botany.....	7	9	0	0	31½	61	31½	61
General Zoology.....	5	10	0	0	25	65	25	65
Human Physiology.....	0	2	0	0	0	7½	0	7½
Vertebrate Embryology...	0	2	0	0	0	5½	0	5½
Histology.....	0	1	0	0	0	8	0	8
Genetics.....	1	3	0	0	2½	13½	2½	13½
Field Biology.....	2	1	0	0	8½	2½	8½	2½
Plant and Animal Function.....	0	1	0	0	0	2½	0	2½
Heredity.....	1	1	0	0	1½	2½	1½	2½
General Biology.....	8	7	0	8½	37½	38½	37½	47
Biology Club.....	1	0	0	0	1	0	1	0
Hygiene.....	1	0	0	0	2	0	2	0
Vertebrate Zoology.....	3	0	0	0	8½	0	8½	0
Plant Physiology.....	2	0	0	0	6	0	6	0
Invertebrate Zoology.....	2	1	0	0	5½	5	5½	5
Comparative Anatomy...	0	1	0	0	0	5	0	5
Local Flora and Fauna...	0	1	0	0	0	5½	0	5½
Animal Physiology.....	1	1	0	0	4	5	4	5
Non-Vascular Plants.....	1	1	0	0	2½	2½	2½	2½
Mammalian Anatomy....	0	1	0	0	0	3	0	3
Nature Study.....	1	0	0	0	2	0	2	0
Human Body.....	1	0	0	0	2	0	2	0
Entomology.....	1	0	0	0	2	0	2	0
Botanical Technique.....	1	0	0	0	1½	0	1½	0
Advanced Botany.....	2	1	0	0	4	4	4	4
Bacteriology.....	2	2	0	0	5½	8	5½	8
Cryptogamic Botany....	1	0	0	0	2½	0	2½	0
Eugenics.....	1	0	0	0	1½	0	1½	0
Morphology and Physiology of Plants.....	1	0	0	0	6	0	6	0
Morphology of Animals...	1	0	0	0	6	0	6	0
Ecology.....	1	1	0	0	2½	4	2½	4
Development of Biological Thought.....	0	1	0	0	0	2	0	2
Cellular Biology.....	0	1	0	0	0	3	0	3
Economic Biology.....	1	0	0	0	2	0	2	0
Biological Problems.....	1	0	0	0	2	0	2	0

TABLE XXVII—Continued

Course	Times Prescribed		Semester Hours Required Background		Semester Hours Required Specialization		Total Semester Hours Prescribed	
	1928	1938	1928	1938	1928	1938	1928	1938
<b>History and Literature of Biology</b>								
Biology.....	○	2	○	○	○	4	○	4
Taxonomy.....	○	1	○	○	○	3	○	3
Chemistry.....	1	1	○	○	8	6	8	6
Educational Biology.....	1	1	○	○	2½	2	2½	2
Human Biology.....	1	○	4	○	○	○	4	○
Introduction to Biological Science.....	○	1	○	10	○	○	○	10
Civic Biology.....	1	○	2	○	○	○	2	○
Physics.....	○	1	○	○	○	6	○	6
Conservation of National Resources.....	○	1	○	○	○	3	○	3
Total.....	57	62	6	18½	196½	292	202½	310½

used 57 times in 1928. Nearly one-third of the prescriptions were in three courses, general botany, general zoology, and general biology. Other courses were seldom required. In 1938, 31 of the 48 courses listed were prescribed 62 times and nearly two-fifths of the prescriptions were in general botany, general zoology, and general biology.

Though there were fewer course titles used in 1938, there were more course prescriptions, the increase being from 57 to 62. The total number of semester hours prescribed increased from 202½ to 310½, or 53.5 per cent. The last two statements show an increase in agreement upon essentials. Furthermore, the nature of the courses which received major emphasis signifies an increased interest in broad courses and professional use of subject matter.

The required number of semester hours in restricted electives totaled 42½ in 1928 and 36½ in 1938 and in free electives 168 in 1928 and 107 in 1938. The total requirements in 1928 amounted to 413 semester hours and in 1938, 454½ semester hours. The average semester-hour requirement per college was 25.8 in 1928 and 28.4 in 1938, or an increase of 10.1 per cent in requirements

for a major in biological science in the 16 colleges. These averages may be compared with the average minimum requirements which were 26 in 1928 and 27.2 in 1938. The survey study shows semester-hour requirements of 25 from the catalog study and 28 from the transcript analysis.<sup>70</sup>

#### COMPREHENSIVE MAJORS IN NATURAL SCIENCE AND SOCIAL STUDIES

##### *Natural Science*

A century ago many of the colleges and universities taught general survey courses in science, such as natural science and natural philosophy. These were followed by comparatively narrow and differentiated courses in zoology, botany, geology, chemistry, and physics. The early high schools also taught survey courses in science and obtained their teachers from the colleges where such courses were taught. Later the teachers who were trained in differentiated courses introduced them into the public high schools and the Report of the Committee of Ten helped to fix them there.<sup>71</sup> Today the survey courses are in demand in the colleges. In fact, the colleges are beginning to teach the introductory or orientation courses in science and the high schools are doing the specialized work in narrow fields. This seems unwarranted from the standpoint of any reasonable basis of curriculum-making. It demonstrates, however, that teachers teach in the secondary schools what they have been taught in college. Teachers colleges which are now preparing secondary school teachers of science by offering majors in zoology, botany, chemistry, and physics to a far greater degree than the integrated majors in science are promoting narrow specialized work in the high schools.

There are three different types of science curricula. One follows the academic liberal arts pattern by offering narrow and highly specialized majors. A second offers broader majors, such as biological science and physical science. The third offers the whole science field as a major and prepares teachers to teach general sur-

<sup>70</sup> *Op. cit.*, Vol. III, p. 70.

<sup>71</sup> *Report of the Committee of Ten on Secondary School Studies*, p. 37, 1894.

vey courses in high schools. The last type introduces a comparatively new organization of science material. In 1928 requirements for this major were generally defined in terms of combinations of science majors or minors. The same practice was continued in 1938 to a considerable degree, though there was a greater variety of combinations. In addition to requiring two majors in science, one major and one minor, one major and two minors, or three minors in place of a major, such requirements as the following were set up: 15 semester hours in science survey courses plus one major; <sup>72</sup> biology major of 24 hours plus chemistry 16 hours, physics 16 hours; geography,  $5\frac{1}{3}$  hours and physiology  $5\frac{1}{3}$  hours; <sup>73</sup> chemistry 16 hours, physics 8 hours, biology 8 hours.<sup>74</sup> The last two requirements may be varied by changing the major emphasis.

In 1938 several colleges defined the natural science major definitely by prescribing individual courses. The following prescriptions illustrate this practice:

State Teachers College, Carbondale, Ill.

Title of Course	Semester Hours Credit
General Chemistry.....	$2\frac{2}{3}$
Qualitative Analysis.....	$2\frac{2}{3}$
General Botany.....	$3\frac{1}{3}$
General Zoology.....	$3\frac{1}{3}$
Mechanics and Sound.....	$2\frac{2}{3}$
Magnetism and Electricity.....	$2\frac{2}{3}$
Heat and Light.....	$2\frac{2}{3}$
General Vertebrate Zoology.....	$3\frac{1}{3}$
General Invertebrate Morphology.....	$3\frac{1}{3}$
Field Zoology.....	$3\frac{1}{3}$
Vertebrate Embryology.....	$3\frac{1}{3}$
Histology of Organs.....	$2\frac{2}{3}$
Geographic Fundamentals.....	$3\frac{1}{3}$
Total.....	$39\frac{1}{3}$

State Teachers College, DeKalb, Ill.

General Chemistry.....	$5\frac{1}{3}$
Qualitative Analysis.....	$2\frac{2}{3}$
General Physics.....	8
Elementary Botany III.....	$2\frac{2}{3}$
Elementary Human Anatomy and Physiology.....	$2\frac{2}{3}$
Material for High School Biology.....	$2\frac{2}{3}$
Heredity and Evolution.....	$2\frac{2}{3}$

<sup>72</sup> Catalog, State Teachers College, Maryville, Mo., pp. 4-5, 1938.

<sup>73</sup> Catalog, State Teachers College, Terre Haute, Ind., p. 52, 1938.

<sup>74</sup> Catalog, State Teachers College, Farmville, Va., p. 64, 1938.

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Geology of Rocks and Minerals.....	$2\frac{2}{3}$
Regional Geology.....	$2\frac{2}{3}$
Economic Geology.....	$2\frac{2}{3}$
Earth History.....	$2\frac{2}{3}$
Select 16 semester hours from one of the following fields:	16
Botany.....	16
Zoology.....	16
Chemistry.....	16
Physics.....	16
Total.....	$53\frac{1}{3}$

Kansas State Teachers College, Pittsburg, Kan.

General Chemistry.....	5
Common Rocks and Minerals.....	1
Elements of Geology.....	3
Foundations of Science.....	5

Students should elect biology 1 and 2 and select electives to make 30 hours in physical science.

State Teachers College, Kirksville, Mo.

General Biology.....	5
From Botany 2a, b and Zoology 3a, b elect.....	$7\frac{1}{2}$
Nature Study.....	$2\frac{1}{2}$
General Chemistry.....	8
General Physics.....	9
Geology.....	5
Astronomy.....	$2\frac{1}{2}$
Total.....	$39\frac{1}{2}$

State Teachers College, Montclair, N. J.

Botany.....	8
Zoology.....	8
General College Chemistry.....	8
Animal Histology .....	2
Comparative Embryology.....	4
Analytical Chemistry.....	8
General College Physics.....	8
Advanced Electricity.....	4
Restricted electives.....	6
Total.....	56

State Teachers College, Trenton, N. J.

Geology and Astronomy.....	3
Educational Biology.....	3
Botany.....	3
Chemistry.....	7
Zoology.....	2
Physics.....	7
Geology.....	2
Regional Study.....	2
Physiology.....	3

Organic Chemistry.....	3
Astronomy.....	1
Advanced Physics.....	$\frac{1}{2}$
Total.....	$\frac{37\frac{1}{2}}{37\frac{1}{2}}$

## State College for Teachers, Albany, N. Y.

College General Science.....	6
College General Science II.....	4
Elect: Biological Science.....	$\frac{1}{2}$
Chemical Science.....	$\frac{1}{2}$
Physical Science.....	$\frac{1}{2}$
Total.....	$\frac{46}{46}$

## East Carolina State Teachers College, Greenville, N. C.

General Biology.....	8
General Chemistry.....	8
General Physics.....	8
Electives.....	$\frac{4}{4}$
Total.....	$\frac{28}{28}$

## State Teachers College, Farmville, Va.

Biology 1-yr.....	8
Chemistry 1-yr.....	8
Physics 1-yr.....	$\frac{8}{8}$
Total.....	$\frac{24}{24}$

It may be noted from this list of prescriptions that the majors in natural science sampled the various fields of science, particularly biology, physics, and chemistry and in several cases required somewhat intensive work in individual fields. The total prescriptions ranged from 24 to 56 semester hours not including Pittsburg, Kansas. Seven of the above nine colleges required more than 36 semester hours.

There were 17 of the 55 teachers colleges studied which offered majors in natural science in 1928. This number was increased to 26 in 1938, an increase of 52.9 per cent.

The distribution of the minimum semester-hour requirement for a natural science major ranged from 24 to  $45\frac{1}{2}$  in 1928 and from 24 to 54 in 1938. The average minimum semester-hour requirements were 33.5 in 1928 and 35.2 in 1938.

The average minimum semester-hour requirements in the other science majors were as follows for 1928 and 1938:

	1928	1938
Biological Science.....	27.7	28.1
Physical Science.....	27.2	26.6
Physics.....	24.4	25.7
Chemistry.....	22.5	26.0
Botany.....	29.6	30.2
Zoology.....	29.7	29.6

The major in biological science was offered most frequently in both 1928 and 1938. It was followed by chemistry, physics, natural science, physical science, botany, and zoology. (See Table XXII.) The highest average requirements for a major were in natural science. Such narrow majors as botany and zoology ranked second and third although majors in each of these subjects were offered but five times in 1928 and 1938.

Deyoe found that the natural science major was offered by one teachers college out of 45 in 1922-23 and by six out of 45 in 1932-33.<sup>75</sup>

Since 1922 marked increases have been made in the offerings of broad majors in science, the greatest increase being made in natural science. The demand for teachers of survey courses in science has been apparent in secondary schools for more than ten years.<sup>76</sup> Also, it has been noted that the high school science teachers are commonly required to teach in more than one science field.<sup>77</sup>

It appears that the teachers colleges are endeavoring to render a distinctive type of professional service by increasing the number of majors offered in the broader science fields. Furthermore, majors in these fields have been more clearly defined, the semester-hour requirements have been increased, and course prescriptions have been increased. Though an adequate major in natural science is somewhat difficult to administer when defined in terms other than combinations of majors and minors, yet it is establishing a place for itself in curricula for science teachers and is demonstrating the possibility of requiring comprehensive majors in teachers colleges. Powers in discussing "The Objectives of Science Teaching" has said, "A fundamental principle of learning is: things that

<sup>75</sup> *Op. cit.*, p. 67.

<sup>76</sup> Finley, *op. cit.*, p. 23.

<sup>77</sup> Finley, *op. cit.*, p. 42.

belong together should be brought together."<sup>78</sup> There is some evidence that related material from various subject fields has been used to develop large units of work. Broad majors should encourage this practice. The same author defines the educational objectives for science teaching as follows:

Definable educational values from science teaching will have been attained if individuals acquire (1) an ability to utilize the findings of science that have application in their own experiences, (2) an ability to interpret the natural phenomena of their environment, and (3) an understanding of, and ability to use, some of the methods of study that have been used by creative workers in the fields of science.<sup>79</sup>

An application of these objectives would provide integration rather than subject differentiation and narrow specialization. In another chapter the same authority recommends a basic curriculum for natural science teachers.<sup>80</sup>

### *Social Studies*

The practice in the field of social studies has been very much the same as in science and approximately the same general changes have taken place. The total field has been divided into history, social science, geography, sociology, economics, and political science. Majors are offered in each of these fields and in social studies in the following rank order: history, geography, social science, social studies, economics, political science, and sociology. Majors are also offered in combined fields, such as sociology and economics, history and government, history and political science, and history and social science.

Data relative to majors in social studies not including the combination majors, such as history and government, are presented in Table XXVIII.

History, which leads the list of majors in Table XXVIII, frequently includes one or more courses in economics and govern-

<sup>78</sup> S. R. Powers, "The Objectives of Science Teaching," *Thirty-First Yearbook, National Society for the Study of Education*, Part I, p. 57, 1932.

<sup>79</sup> *Ibid.*, p. 50.

<sup>80</sup> *Ibid.*, p. 340.

ment. The most common course requirements in history were American history, European history, modern Europe, world history, and history of civilization. Increases have been made in the requirements in these fields. Decreases have been made in ancient

TABLE XXVIII

List of Majors in the Field of Social Studies Showing Times Required,  
Range of Minimum Semester Hours Required, and Average  
Semester Hours Required, 1928 and 1938

Major	Times Offered		Range in Semester Hours				Average Requirement for a Major	
	1928	1938	1928		1938		1928	1938
History.....	34	37	16	to $36\frac{2}{3}$	20	to 34	25.5	26.6
Geography.....	31	30	16	to $34\frac{2}{3}$	20	to 32	24.2	25.1
Social Science.....	20	25	20	to 43	24	to 54	26.1	31.7
Social Studies.....	8	18	24	to $45\frac{1}{3}$	24	to $45\frac{1}{3}$	33.7	36.0
Economics.....	6	11	20	to $26\frac{2}{3}$	20	to 33	23.7	24.5
Political Science.....	7	10	15	to 25	$21\frac{1}{3}$	to 32	22.7	25.3
Sociology.....	4	6	$17\frac{1}{2}$	to 24	20	to 25	20.7	23.4

history, medieval history, and in courses dealing with short periods of American or European history. Bagley and Alexander noted very much the same course prescription in 1931.<sup>81</sup>

Geography has been a common requirement for elementary school teachers. Its rank, second to history as a major for secondary school teachers, may be a carry-over from the normal school or from the elementary school curriculum of the college. A slight decrease may be noted in its importance as a major because its content is now commonly integrated with other aspects of the social studies content.

The major in social science was offered by 25 per cent more colleges in 1938 than in 1928. The minimum semester-hour requirements were comparatively high in 1928 and have been increased 21.5 per cent during the past ten years. Eleven colleges required 30 or more semester hours for a major in this field in 1938 as com-

<sup>81</sup> W. C. Bagley and T. Alexander, *The Teacher of the Social Studies*, Report of the Commission on Social Studies, Part XIV, p. 35, 1937.

pared with three in 1928. However, the mode for both years was 24.

Social studies was designated as a major eight times in 1928 and 18 times in 1938, or an increase of 125 per cent. The average of the minimum semester-hour requirements for a major in this field was 33.7 in 1928 and 36 in 1938, or an increase of 6 per cent. Majors in both social science and social studies were offered 28 times in 1928 and 43 times in 1938. These figures show a 53.6 per cent increase in such broad fields of instruction and a distinctive type of response to professional curriculum objectives. A few colleges offered majors in both fields, thereby pointing out a distinction between social studies and social science which does not seem to be commonly recognized.

The report of the Commission on Social Studies of the American Historical Society has used the terms interchangeably. It began its report with the statement that "The social sciences, more than any other division of the school curriculum, are concerned immediately with the life, the institutions, the thought, the aspirations, and the far-reaching policies of the nation in its setting."<sup>82</sup> On page 49 of the same report is the statement, "The program of social science instruction is derived in the main from the following systematic bodies of knowledge and through—(a) physical and cultural geography, (b) economics, (c) cultural sociology, (d) political science and (e) history."<sup>83</sup> Catalog descriptions of social science majors commonly include one or more courses in history. Social studies majors commonly require work in all fields.

It has been said that one of the most pressing problems in the preparation of high school teachers is "the selection of the most desirable combinations of subjects for which to prepare teachers."<sup>84</sup> Broad majors in social studies and social science have the merit of offering preparation in related fields, such as history, civics, and economics. They also offer the necessary preparation for teachers of survey courses. E. U. Rugg, in the National Survey, recommends "That the number of curricula should be reduced

<sup>82</sup> *Conclusions on Social Studies*, p. 1, 1934.

<sup>83</sup> *Ibid.*, p. 49.

<sup>84</sup> *National Survey of the Education of Teachers*, Vol. III, p. 68, 1935.

and those that are offered should be integrated in terms of relationships between various fields of specialization.”<sup>85</sup>

In contrast to the broad majors it seems evident that there is a growing tendency to offer majors in the narrower fields of economics, political science, and sociology. The minimum semester-hour requirements are also being increased in these fields. This movement may be in response to particular weaknesses in our economic and political theories and practices. It is not likely that beginning teachers or even experienced teachers will be called upon frequently to teach full time in one of these fields. Deyoe noted the same general trend in these narrow fields. He also noted no majors in broad fields.<sup>86</sup>

The majority of the majors in social studies and social science offered by the 55 colleges studied have not been clearly defined except as to the minimum number of semester hours required. Only six colleges out of the total of 28 which offered majors in one or the other of the two fields in 1928 prescribed courses beyond the background requirements. In 1938, 22 colleges defined their majors in these fields by prescribing courses covering at least half of their requirements. Seven simply announced the major and permitted students to meet requirements by taking free electives. There were 12 colleges which recommended restricted electives to meet the greater part of the major requirements. One college required a double major in the general field to include history and economics, government, or sociology.

Restrictions were of such types as: elect eight semester hours from each of the following—history, economics, government, sociology, and geography; elect 12 semester hours from each of four groups or departments; elect sequences of six semester hours from each of three groups in addition to a major in history; elect four to six hours of work from groups of courses recommended; take a major and a minor in the general field in accordance with recommendations; and make group elections to the extent of 36 semester hours.

In cases where majors were defined through course prescriptions,

<sup>85</sup> *Ibid.*, p. 67.

<sup>86</sup> *Op. cit.*, p. 67.

the fields of history, government, and economics were commonly represented in 1938. History and geography were more frequently required in 1928 than in 1938.

In general it appears that broad majors in the fields of social studies and social science were more frequently offered in 1938. Important percentages of increase in the minimum semester-hour requirements for majors have been noted in these fields. Majors in the broader field have not been clearly defined by a majority of the colleges. However, there has been a tendency to increase prescriptions and to decrease electives since 1928. Though the narrower majors have also increased in number, yet because they were relatively few, it seems that in general prospective teachers of social studies were better prepared to render a broad service in 1938 than in 1928.

#### SUMMARY

The teachers colleges have differentiated their fields of specialization. That this movement has not been confined to the past ten years is shown by the fact that the 55 teachers colleges studied offered 716 majors for prospective secondary school teachers in 1928. The increase to 840 in 1938 seems quite normal when compared with developments during the ten years previous to 1928. The average number of majors offered by the colleges increased from 13 to 15.3, or 18 per cent, since 1928, and a slightly greater increase has been made in the number of minors offered.

Increases have been made in the number of semester hours required for a major and the greatest increases have been noted in broad majors.

Well-established majors, such as English and mathematics, have been well defined as compared with some of the newer majors and those which seem to be groping for clearer objectives. Social studies and natural sciences fall in the class of newer majors and French and Latin seem to fit into the classification of those seeking clearer objectives.

The general trend toward broader teaching fields is made evident by the occurrence of broader major offerings, increased semester-

hour requirements for certain majors, required major and minor combinations, broader courses within major fields, and the changes in state certificate requirements. In contrast to this trend, it should be stated that a few curricula are narrow, not well adapted to teaching fields, and frequently include narrow units of work and traditional courses.

There is definite evidence that added attention has been given to the problem of determining curriculum objectives and of selecting and prescribing at least the fundamental instructional material to meet the objectives. It seems that ten years ago a number of colleges listed impressive arrays of courses in major fields yet little was said about what a teaching major proposed to accomplish for the profession and how it proposed to do it. Marked improvements have been made in this respect, prescriptions have increased, sequences have been defined, and frequently a distinction has been made between background and specialization requirements.

The average of the minimum semester hours required for a major by the various colleges has increased since 1928. An increase may also be noted in the average number of maximum semester hours permitted for a major.

Table XXIX summarizes information relative to major offerings in subject matter or academic majors and the average semester-hour requirements in these major fields. Major offerings do not correspond exactly with data in Table XXII because majors in colleges which did not specify semester-hour requirements were not included in this table.

Actual requirements for a major as noted in the detailed studies of English, mathematics, and biology were considerably greater for both 1928 and 1938 than the averages shown in Table XXIX. This should be expected because only the averages of minimum semester-hour requirements for a major are shown in the table. It is of interest to note that the average minimum requirements were above 20 semester hours in 1928 and ranged as high as 33.7. The range of average minimum requirements for 1938 was from 23.4 semester hours to 36.0 and an increase has been made in the requirements for every major except one (physical science). It was noted in the early part of this chapter that the average maxi-

mum semester-hour allowance for academic majors in 1938 was 34.4 per cent higher than the average minimum requirement for the same year. This spread in requirements provides for broad as well as intensive preparation in certain teaching fields. In general Table XXIX shows increases in the number of colleges offering

TABLE XXIX

Number of Teachers Colleges Offering Majors in Subject Matter Fields and the Averages of Minimum Semester Hours Required for Majors, 1928 and 1938

<i>Major</i>	<i>Number of Colleges Specifying</i>		<i>Average of Minimum Semester Hours Required</i>	
	<i>1928</i>	<i>1938</i>	<i>1928</i>	<i>1938</i>
English.....	47	52	26.1	28.7
Library.....	0	4	0	30.
German.....	10	15	21.9	27.9
French.....	38	41	24.5	26.1
Latin.....	34	37	24.4	25.6
Spanish.....	21	17	24.2	26.
Mathematics.....	43	52	24.5	25.8
Natural Science.....	17	26	33.5	35.2
Biological Science.....	14	16	27.7	28.1
Physical Science.....	14	15	27.2	26.6
Physics.....	26	28	24.4	25.7
Biology.....	28	30	24.8	26.2
Chemistry.....	30	36	22.5	26.0
Botany.....	5	5	20.6	30.4
Zoology.....	5	5	29.7	29.6
History.....	34	37	21.6	26.6
Social Science.....	20	23	26.1	31.7
Social Studies.....	8	18	33.7	36.0
Geography.....	31	30	24.2	25.1
Sociology.....	4	6	20.7	23.4
Economics.....	6	11	23.7	24.5
Political Science.....	7	10	22.7	25.3

the individual majors. These increases are particularly marked in broad majors such as social studies and natural science. It also shows increases in the average minimum semester-hour requirements in nearly every teaching field. From studies of minimum, maximum, and actual requirements for preparation in a major teaching field it has been noted that the teachers colleges are pro-

viding more adequate preparation in subject matter. In fact, on a comparative basis, the present provision may be rated as adequate.

## CONCLUSIONS

1. The principle of differentiation has been applied to an increasing degree in the preparation of secondary school teachers by the state teachers colleges. The number of majors and minors offered has increased in nearly every college studied.
2. There has been a trend toward a clearer definition of the professional objectives of specialization through stated minimum requirements, course prescriptions, and restricted electives. Course prescriptions have been increased and free electives decreased.
3. Educational theory points toward the discontinuance of narrow fields of specialization for teachers. However, there has been little change in the number and extent of the narrow majors during the past ten years. Where new majors have been set up they were largely in broad teaching fields. Teaching fields have been broadened by increasing the semester-hour requirements, by combining related majors and minors, by establishing broader courses of instruction within major fields, and by changing state certificate requirements.
4. Teachers college curricula provide more adequate scholarship in the subject or subjects to be taught and greater provision is being made for "margins of subject matter in related fields."
5. Course prescriptions in several teaching fields show evidence of greater emphasis being placed upon the social significance and functional value of subject matter.
6. With the clearer definition of professional objectives and the added emphasis upon cultural background, professional scholarship, and margins of subject matter in related fields, there seems to be a definite tendency toward extending the program of preparation for secondary school teachers beyond the minimum four-year requirement.

## Chapter V

### *General Summary and Conclusions*

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#### GENERAL SUMMARY

DATA have been presented which give a somewhat comprehensive view of the changes which have taken place since 1928 in the curriculum requirements for the preparation of secondary school teachers in 55 teachers colleges. These data have been used to point out possible trends in recommended or acceptable practices.

It has been noted that the 55 teachers colleges have felt the importance of extending the cultural background of prospective secondary school teachers. Through course prescriptions the colleges have required a greater number of semester hours of work in seven subject fields and in the following rank order: social studies, science, English, geography, general psychology, mathematics, and music. When based upon the total requirements (course prescriptions plus elections), the rank order of subjects receiving increased emphasis has remained practically the same with the exception of mathematics. (See Table XI.) On this latter basis of total requirements decreases have been noted in the following fields: foreign languages, art, mathematics, and physical education. The change in the total semester hours required in all fields has amounted to an increase of  $259\frac{1}{3}$  semester hours, or 12.6 per cent, and the increase based upon the average semester hours required per college has been from 37.4 in 1928 to 42.1 in 1938.

The changes in the types of courses required for background purposes are of significance. The principal increases have been made in broad orientation or survey courses and so-called functional courses and decreases have been made in short unit courses and traditional academic courses.

If one were to assume that a core of background courses would

be made up of those courses which were required most frequently, then the core courses in five leading fields would be chosen from the following and in the order given:

English, 1928: English Composition, Rhetoric and Composition, Advanced Composition.

English, 1938: English Composition, Fundamentals of Speech, Introduction to Literature.

Social Studies, 1928: American History, Sociology, American Government.

Social Studies, 1938: American History, Principles of Economics, History of Civilization.

Science, 1928: General Biology, Educational Biology, Civic Biology.

Science, 1938: General Biology, Survey of Biological Science, Survey of Physical Science.

Physical Education, 1928: Physical Education, Health Education, Hygiene.

Physical Education, 1938: Physical Education, Health Education, Personal Hygiene.

General Psychology: Same in 1928 and 1938.

Mathematics, 1928: Arithmetic, College Algebra, Trigonometry.

Mathematics, 1938: College Algebra, Introduction to Mathematics, Trigonometry.

The above listing of courses most frequently required summarizes somewhat the course requirements in the leading subject fields. It will be noted that foreign languages, art, and music are not included under the leading subjects required for background purposes. Foreign languages would rank above mathematics if electives in this field were included in the basis of selection. Art and music were neglected subjects.

The number of semester hours devoted to electives in the background fields was decreased 17.6 per cent. They still constituted approximately one-third of the total requirements in 1938. Electives in the field of education amounted to approximately one-sixth of the total requirement in 1928 and less than one-twelfth in 1938.

The total semester-hour requirements in education have been reduced 10.5 per cent during the past ten years. This reduction is in contrast to the background and specialization fields where increases have been noted. The average number of semester hours required per college in education and student teaching was 25.9 in 1928 and 23.2 in 1938. These averages include courses in special methods which are sometimes credited to their respective fields of subject matter specialization. The courses most frequently required and the semester hours required in each may be noted in Table XX. It seems clear that the reduction in the total requirement in education may be explained by the fact that the field is more definitely defined, skill courses have been reduced in number, and there are indications that theories and techniques of teaching are being presented as an integrated part of subject matter courses.

Major fields of specialization have increased in variety and in number. The same is also true of minor fields. The number of majors offered in narrow fields has remained about constant, while the principal increases have been made in the more comprehensive fields and in special subject fields. The most conspicuous increases have been made in the comprehensive majors of social studies and science and in a few of their differentiated majors. State certificate requirements are now designating various amounts and types of specialization for high school teachers. Marked changes have been made in such requirements during the past ten years.

In keeping with the emphasis upon extensive and intensive scholarship in teaching fields, the semester-hour requirements for a major have increased in nearly every subject matter field. These increases have been noted in relation to minimum requirements for a major, maximum hours permitted, and actual hours required.

The limited study of actual hours required has been influenced somewhat by the lack of a clear definition of requirements for a major in 1928. However, a comparative study of requirements for a major in 1928 and 1938 has shown marked increases in course prescriptions, clearer statements relative to electives, and clearer discrimination between background and specialization prescriptions and electives.

The study of course prescriptions for majors in English, mathe-

matics, and biology has shown that skill courses and purely academic courses were more frequently required in 1928 and survey and functional courses were more frequently required in 1938. This study has also shown marked increases in course prescriptions and almost corresponding decreases in free elections. Requirements in restricted electives have remained almost constant.

It has been noted that the average number of semester hours required in cultural background work amounted to 37.4 in 1928 and that the average number of semester hours required in education and student teaching amounted to 25.9 in 1928. The average semester-hour requirements in majors and minors were approximately 26 and 13 respectively for 1928. Since the most common practice in 1928 was to require one major and one minor, the total average requirement would amount to approximately 102.3 semester hours. The corresponding averages for 1938 amounted to 42.1, 23.2, 28, and 15. However, the most common practice in 1938 was to require one major and two minors—hence the total average requirement of 123.3 semester hours for 1938. The average semester hours required for graduation was 126.7. These figures indicate why background requirements are frequently included in specialization or major requirements and also show the extent to which prescription has increased and free election decreased.

#### GENERAL CONCLUSIONS

Classified authoritative statements relative to desirable curriculum requirements in the cultural background, education, and specialization fields have been placed at the beginning of their respective chapters. Following each set of quotations and derived from them are criteria for judging the significance of changes and possible trends as noted in each chapter. At the close of each chapter is the summary of the data presented and the conclusions. The conclusions in each case are based upon the criteria set up. Conclusions drawn from the total study must naturally include the conclusions found at the close of each chapter. Therefore, in order to avoid frequent repetition of these conclusions, references are made to these pages—background conclusions, pages 54-55; edu-

cation conclusions, pages 97-98; specialization conclusions, page 156.

General conclusions derived from the sources mentioned above follow:

1. The number and variety of course titles used in setting up the requirements in various subject fields tend to show a lack of agreement upon nomenclature and essential courses.

There seems to be no general trend toward increasing or decreasing the number and variety of such titles. Old courses have been dropped; traditional courses continued; new courses added; and the total has remained approximately the same. Trends in nomenclature may be of little significance. A general agreement upon essential courses is important in vocational schools and intensive studies should be made of minimum essential requirements for various fields.

2. It seems evident that the teachers colleges as a whole wish to provide a richer cultural background for prospective teachers and more adequate scholarship in teaching fields.

The number of semester hours required in cultural background and specialization fields has been increased. Notable additions have been made in the fields of social studies, science, literature, and history and development of language. The trend seems to be toward providing a clearer understanding of present-day life for background and teaching purposes. There are also many courses of the formal and academic type which are offered and prescribed.

3. Two movements are quite apparent in the field of education. The first is away from courses which emphasize teaching skills and routine in management. The second is toward courses or types of subject matter which emphasize "points of view" or "interpretative background." The increased requirements in psychology (educational and general) and educational philosophy suggest through their modern theories the reasons for decreases being made in courses which prescribed skills and routine.

The principal subjects or activities in education which have demanded added attention include student teaching, the general course in secondary education, the introductory course in education, and the practical course in tests and measurements. In spite

of these added interests the requirements in the total field of education have been decreased during the past ten years. It may be assumed that this decrease has resulted from a careful analysis of the individual courses in order to note duplication and that this analysis has been followed by a recasting of many of the older requirements and an integration of much of the material which is closely related. It may also be assumed that a tendency toward treating subject matter professionally has made the reduction in education requirements possible and perhaps advisable.

4. The study of subject matter requirements indicates a trend away from formal academic courses. Decreases in such courses were frequently paralleled by increases in functional courses and courses which stress contemporary life.

5. As companions of young people and as members of society, teachers should have an interest in and an appreciation of art and beauty. It seems apparent that prospective teachers should be given more opportunities to study aesthetics and be able to appreciate, interpret, and create art and music for and with others. It may be claimed that though such opportunities are commonly offered, more courses should be prescribed in these fields. Prescriptions in literature have been increased to a marked degree. Prescriptions in art, music, and philosophy have been neglected in the majority of teachers colleges and the low requirements have remained almost unchanged during the past ten years.

6. In such areas of human experience as are included under literature, social science, physical science, biological science, general mathematics, and general language, the teachers colleges have made definite developments. Not only have the prescriptions in such fields been increased, but it may also be noted that introductory or orientation courses which provide broad and meaningful views of these important fields of experience, have been organized and presented. Perhaps one of the most significant forward movements has been through the development of comprehensive and well-integrated courses which tend to unify related materials that otherwise might be comparatively pedantic, uninteresting, and unfruitful. From the professional standpoint, it may be predicted that the development of survey courses in the colleges will have a

beneficial effect upon the selection and organization of curriculum materials and courses of instruction in the high schools.

7. The study has shown that in accordance with the principle of integration which has influenced the development of orientation and survey courses, broader majors for specialization purposes have been developed. Such majors were offered by a few colleges in 1928. However, they have increased to an extent which indicates that to offer such courses may become a definite professional policy to be more generally followed. Since teaching fields are broad, broad majors would be a professional choice.

8. Another movement which has professional significance should be noted in the use of prescriptions and electives. The marked increase in the number of course prescriptions and the corresponding decrease in electives signify that professional objectives have been more clearly defined. Vocational and professional education differ from general education in having something definite to work for. It seems clear that those who prepare a curriculum for prospective high school teachers know the professional objectives of their curriculum and should set up and prescribe the minimum essentials for meeting the objectives. If this is true, then it is evident that through increased prescription the teachers colleges are becoming more professional.

9. It seems necessary to recognize that education requirements may not be reduced materially below the general average of 1938, that broader majors will require more time, that there appears to be a trend toward increasing background and specialization requirements, and that the interests and special abilities of individual students should be provided for through free electives. When the time elements involved in these fundamental requirements are totaled, it will be noted that the teachers colleges are tending toward a five-year program for the preparation of secondary school teachers.

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## *Appendix*

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### LIST OF TEACHERS COLLEGES STUDIED

Arizona State Teachers College, Flagstaff, Arizona.  
Arizona State Teachers College, Tempe, Arizona.  
Fresno State College, Fresno, California.  
Colorado State College of Education, Greeley, Colorado.  
Western State College, Gunnison, Colorado.  
Georgia State College for Women, Milledgeville, Georgia.  
Southern Illinois State Normal University, Carbondale, Illinois.  
Eastern Illinois State Teachers College, Charleston, Illinois.  
Northern Illinois State Teachers College, DeKalb, Illinois.  
Western Illinois State Teachers College, Macomb, Illinois.  
Illinois State Normal University, Normal, Illinois.  
Ball State Teachers College, Muncie, Indiana.  
Indiana State Teachers College, Terre Haute, Indiana.  
Iowa State Teachers College, Cedar Falls, Iowa.  
Kansas State Teachers College, Emporia, Kansas.  
Kansas State Teachers College, Pittsburg, Kansas.  
Western Kentucky State Teachers College, Bowling Green, Kentucky.  
Eastern Kentucky State Teachers College, Richmond, Kentucky.  
Louisiana State Normal College, Natchitoches, Louisiana.  
State Teachers College, Bridgewater, Massachusetts.  
Western State Teachers College, Kalamazoo, Michigan.  
Central State Teachers College, Mt. Pleasant, Michigan.  
Michigan State Normal College, Ypsilanti, Michigan.  
State Teachers College, Moorhead, Minnesota.  
State Teachers College, Winona, Minnesota.  
State Teachers College, St. Cloud, Minnesota.  
Southeast Missouri State Teachers College, Cape Girardeau, Missouri.  
Northeast Missouri State Teachers College, Kirksville, Missouri.  
Northwest Missouri State Teachers College, Maryville, Missouri.  
Nebraska State Teachers College, Chadron, Nebraska.  
Nebraska State Teachers College, Kearney, Nebraska.  
Nebraska State Teachers College, Peru, Nebraska.  
New Jersey State Teachers College, Montclair, New Jersey.  
New Jersey State Teachers College, Trenton, New Jersey.  
New Mexico State Teachers College, Silver City, New Mexico.  
State College for Teachers, Albany, New York.  
East Carolina Teachers College, Greenville, North Carolina.

State Teachers College, Mayville, North Dakota.  
Bowling Green State University, Bowling Green, Ohio.  
East Central State Teachers College, Ada, Oklahoma.  
Central State Teachers College, Edmond, Oklahoma.  
State Teachers College, East Stroudsburg, Pennsylvania.  
State Teachers College, West Chester, Pennsylvania.  
Rhode Island College of Education, Providence, Rhode Island.  
Northern State Teachers College, Aberdeen, South Dakota.  
State Teachers College, Murfreesboro, Tennessee.  
East Texas State Teachers College, Commerce, Texas.  
North Texas State Teachers College, Denton, Texas.  
Sam Houston State Teachers College, Huntsville, Texas.  
State Teachers College, Farmville, Virginia.  
State Teachers College, Harrisonburg, Virginia.  
Fairmont State Teachers College, Fairmont, West Virginia.  
State Teachers College, Milwaukee, Wisconsin.  
State Teachers College, Oshkosh, Wisconsin.  
State Teachers College, Stevens Point, Wisconsin.













